Cape Vintage Engine

Newsletter of the Cape Vintage Engine and Machinery Society. **Number 6. August 2008.**

The WWU has come and gone and what a great show it was! Cars, motorbikes, tractors, crawlers, rollers and engines using steam, petrol, paraffin and diesel, all of them running at some time during the day and some running the whole day. Conditions ranging from pretty rough to immaculate. Where else could you play with such a wide range of machinery?
Chatting to Peter Noble about the wonderful restoration of the Grey Fergy and the subject of fuel came up (again). He mentioned that he had set the timing for the tractor to run on petrol, it being a petrol/TVO engine. The penny dropped! How many of us run our petrol/paraffin engines on petrol only and how many of us set the timing strictly to the factory timing marks? I have remarked on a few occasions, to the unfortunate souls within earshot, after the normal start up on petrol and change over to paraffin how an engine settles down to a steadier, smoother thump thump thump. Paraffin burns slower than petrol so the spark is set to occur a little earlier on oil engines to enable the whole charge to burn, so when running on petrol only, retard your timing a touch and the engine won't sound as "fussy".
Thanks to Gordon for putting this and all previous newsletters together. ***Phil.***

We have had a pile of very welcome contributions since the last newsletter - so much so that we have had to hold some over for the next issue. ***Andy*** has provided the next instalment of the Mill saga as well as the promised article on the Crossley restoration. ***Peter Noble*** has written a fabulous article on Fergies, ***Bill Hoskin*** a bird's eye view of the WWU, ***John Menasce*** a very interesting 'technical teaser' and ***Ron Wiley*** has provided the 'unusual'.

Winter Warm-up. A big thank you to Arthur for the venue and for all the hard work he and Phil put in to make it such a great day. Likewise to Graham for his hard work cleaning up the venue.
It was good to see Phil there, (now firing on all cylinders) and also John and Nelia Mc Gregor. John was looking remarkably sprightly after his recent operation and we wish him a speedy total recovery.
Incidentally, when I first joined the club I had managed to acquire an International LA and a Petter at a scrap yard, both of which had parts damaged. Unasked, both Phil and John presented me with the replacements I needed. At that stage I had met John once and had not even met Phil and had only spoken to him on the phone.

A panoramic view across the lower end of Arthur's property.

One of the highlights of the day for me was ***Keith Wetmore*** driving ***Arthur's*** diesel roller up the road towards the house, heading directly for the septic tank (unmarked) with Arthur running along behind him shouting and frantically waving his arms trying to stop him (he succeeded). A while later, ***Phil*** who was driving the little Ransomes MG crawler and heading in the same direction, pulled on the steering clutch lever to do a 'U'ey and promptly got the lever stuck and proceeded to rotate in a circle until he could get the lever free. Looked quite spectacular - for a while it looked as if he was going to succeed where Keith had failed. I was getting ready to throw him a pair of water wings and a clothes peg. *Gordon.*

Also seen - Phil removing a spark plug with a hammer. He will probably try to talk his way out of this one by saying that it had a plug spanner welded to the end of the handle!

Villiers 4-stroke and dynamo. owned by *Trevor Bailey*

Wolseley with compressor owned by *Gavin Mitchell* and bought as part of a six cylinder Crossley gen set.

F to B- Ransomes mower with Robin engine, Australian Scott-Bonnar mower with Villiers engine and air cooled Ruston YB diesel. All owned by *Phil.*

Winter Warm-Up 2008. By ***Bill Hoskin.***

Bear with me while I describe my day - it's 13th July 2008 - I have just returned from the noise and bustle of Franschhoek. No, I wasn't attending the Bastille Day celebrations, but rather the 'Winter Warm Up' at Arthur's small holding just outside town.

My wife has, on occasion, attended these annual meetings, as she encourages my interests as I do hers (she is a dedicated weaver bird) - but today she had a special project that needed completion for an exhibition. She kindly packed a lunch box and wished me 'Enjoy your day'. Truly I was able to please her (i.e. getting out of her hair - so to speak) and doing what she instructed to do! And I quote her last advice "Don't talk too much b?sh?t !"

When I looked at the video when I got home (Edith wanted to see), I recalled seeing a beautifully restored wine pump ***(Gordons)*** reciprocating on both cylinders circulating water - hey I wish he was using correct fluid - but sadly 'twas but water!

Pompes Fafeur pump driven by a 1937 International Harvester LA Petter AP1 behind.

Then ***Andy's*** green Fairbanks Morse bucket head engine - hey how else does one describe the epitome of water cooling? - let the blerry stuff boil!) put-put-put-ehmm-put-puting all day alongside a bright red petrol stationery engine ***(Hilton Franz)*** happily spinning all day long. I counted at one stage about 10 engines running - including the smallest stationary I have ever seen. ***Stephen*** brought along a 33cc Sachs 2-stroke - and it made more noise that the others put together.

Andy's Fairbanks ZC52 (52 cubic inch capacity)

Senator which is a Wolseley look-alike, marketed by Malcomess, owned by *HiltonF ranz*

Steve's Sachs Stamo 30

There were two stars of the day's show - firstly the 1901 Benz from the 'Crankhandle Club' - I watched as the driver ***(Harvey Metcalf)*** casually pulled the flywheel of the rear mounted motor over and it immediately chuffed into a regular beat - we all slapped him on the shoulder in congratulation. He declared that he was more surprised than us. He then started a traffic jam carrying amazed passengers for a trip around the plot.

1901 Benz

The works. Note the flywheel.

This brings me to the real star of the show and my reason for my days outing - when I arrived I was surprised that the field was virtually empty - was I too late or too early - was it the wrong day?

I ambled around to the barn to witness ***Arthur's*** Aveling steam tractor poking its nose out of the shed amid a cloud of steam and then was roped in to help numerous strangers (and some well known faces) off-load stationary engines (and the wine pump) from various bakkies.

My focus, as some of you guys know, is 'steam on the road' as opposed to yer railway steam trains. For me to see Arthur's tractor in steam is a magnet - more so to see the man at the controls doing wot he likes best - driving his steam tractor!

Arthur's 1923 Aveling and Porter steam tractor.

But that's not all - ***Arthur*** moved onto the single cylinder Aveling diesel roller - you recall the traffic jam I mentioned - this huge beast is remarkable; its ticks over at a lazy 50 rpm and goes anywhere and changes direction from forward to reverse in an instant. Then to add to the traffic chaos Arthur started the Lanz tractor - yet another single cylinder and as, the Aveling Barford diesel roller, wif blerry great flywheels on both sides. I'm surprised that the cops didn't close the road to Franschhoek as the smoke, emitted during the start up process, must surely have impeded the through traffic!

Arthur's Aveling GX roller

Thanks to Arthur for the venue and all those who made the day such a pleasurable event - **and the sun was shining!** Next year I will return - but not without something trailing behind me- maybe the Kübelwagen? ***BH***

Compagnes Mill - Launder Rim - Stage One. By: ***Andy Selfe.***

During last week, I was contacted by oom Manie Muller, who lived a couple of hundred yards away from the Mill in his younger days. It was oom Manie who told me recently that he remembers that the launder had been made of corrugated iron sheet folded up into a trough. I sent him the progress report of when I hoisted it up and this triggered his memory and he rang me to say that he further remembered that it had wooden rims, or 'gunwales' along each side. We were both concerned that the modern sheeting (.4mm) might not be as thick and therefore as strong as the original. He remembers a good strong flow of water in the launder and while it's tempting to ignore the weight because it's on the move, it's still there and it still weighs 1kg per litre! If the channel were to sag between the supports, the sheets would be a write-off. The supports are fairly evenly spaced at around 6m, and I'm not keen to change the design from how it was when it last worked, by putting in more uprights.

Incidentally, we have this picture of the now dismantled Mill in Stanford, courtesy of Alan Berr

I had some old fascia Oregon boards, 6 metres long, part of salvaged materials from a railway shed which used to stand near the top of Sir Lowry's Pass. In old sizes they are 9" X 1¼". I'm busy cutting these lengthwise, and by running the router with the radius cutter along the newly cut edge twice, I've been able to make the new edge half-rounded:

Gutter bolts will pass through the sheet, then the plank, then the sheet again after wrapping it over the rounded edge. To join the planks, I have half-metre lengths of steel flat bar, 6mm thick and 100mm wide with eight 8mm holes in each for cup-squares. I've managed to get bolts with unmarked heads again.

While on the subject of ex-railway materials, I also brought down two lengths of rail which I need. A pair for the one next to the Mill-house wall that I pulled straight last time is needed and another upright is required to support the 'upper' end of the last section of launder, over the wheel, which will be made of wood. These rails had been used as wash-line supports at the railway gangers' houses near here, which were demolished recently. By cutting off the cross-bars and welding them to the ends of the uprights, we have two suitable lengths. The 60-lb rails are marked 'Barrow Steel, IX 1891'. I looked up Barrow-in-Furness: The town grew from a tiny 19th Century hamlet to the biggest iron and steel centre in the world, and a major ship-building force, in just 40 years. It is now the busiest shipyard in England, with the largest covered ship-building hall in Europe.

A nice touch, and age related! I will make sure the raised lettering is visible. The other upright already in place has a very feint CAPE just visible, probably made for the Cape Government Railways. The line past here was laid in about 1900, but now has 90lb rails.

But the first job was to measure by how much to extend the launder at the top end and to cut a length off the last sheet and to paint the outside of that and fit it:

In the week, I had the opportunity to make an extra cross-bar, from which the launder will hang. Hanging from the others are the remains of old wrought eye-bolts which must have had some kind of strap attached as a sling for the launder to hang in. So, as a guess, I made this:

Note the square nuts, made from some axle steel bar cut off in slices, drilled and tapped. The strap is normal hoop-iron, drilled and pinched between two square flat washers. In position, they look like this:

I'm waiting for someone to notice that's 20mm and not ¾" Whit!

That was my progress on Saturday. Monday was a public Holiday and I managed to sneak off, although a lot of farms were still picking Granny Smith and Pink Lady. The day was spent making up a full length of wooden rail for one side of the launder. More cutting of the Oregon planks lengthwise and routing them to make the half-round edge for the sheet to wrap over and joining then end to end with the joining plates. I had to serial number the planks and plates at the joins, as there are slight differences in the positioning of the holes. It took most of the day to get this far. Joined end to end, the assembly measures 32.5 metres:

I also sanded them and in the cases where the old railways paint was thick, I used the power planer on it first. The two on the left still need that treatment. Before painting them (not covering the areas where the serial numbers are), I offered one up against the side of the launder, to see how I would be able to wrap the top edge of the corrugated sheet over. It's not going to be easy! I soon realised that the corrugations are in the way and that it will be essential to flatten a band on each upper edge. I tried with G-clamps and a flat steel plate, but it didn't work. It would also have been a massive job, bearing in mind the overall length of the corrugated section will be more than 30 metres.

I hit on the idea of a pair of hand-held rollers, pinching together, about 180mm wide, which will allow for the wrap-over and part of the sheet against the board. So the roller is the next project!

I then painted the planks, both sides and edges and ends with our favourite pant, starting the new drum. This means that so far, 30 litres of the stuff has been applied to something on or around the wheel! Interestingly, this new drum must be formulated differently (it's a by-product of making coke out of coal for steel making) and this drum smells, just as agreeably, of Stockholm tar!

I also marked out the hole where one of the steel rails will stand and started digging. The ground is as hard as it is here! I'm hoping that somebody from the farm will continue!

Next job, the roller.... job for another Public Holiday this week!

Technical Teaser- Sparkplugs. By ***John Menasce.***

I genuinely don't know the answer and am flummoxed by the illogicality of the events.

- I have had a series of new sparkplugs failing in old engines.
- I have a batch of demountable plugs- probably 50 or so years in age – some almost new and some fairly used.

These oldies work far better in these old engines than the new one piece plugs and I want to know why.

- They have a visibly stronger spark off these old maggies, which is puzzling as they have no inbuilt impedance like modern plugs to keep the spark voltage up and build up the electrical energy until the voltage is high enough to jump the gap in a large discharge.
- They don't seem to suffer from central insulator electrical breakdown and internal shorting.

I have theorised about heat ranges especially plugs running too cold and that has been disproved as even the "correct heat range" of modern plugs fail from insulator electrical shorts.
e.g. a Champion D16 in a Lister D suffers from insulator breakdown. The D23 seems better but at R125.00 per plug it is not worth experimenting with. The Type Ds run best on a odd assortment of 18 mm demountable plugs without so much as missing a beat.
My JAP 2 is happy to run on a demountable KLG plug but fouls a modern NGK BP6ES .
Both our Wolseleys are now running on demountable plugs without missing a beat.
Yet our Briggs and Strattons are quite happy to run on modern plugs be they D16 for the old cast iron Type B or, modern compact plugs for the 60000 and 80000 engines.
All our Villiers are running on modern plugs whether they are 2 stroke or four stroke, as is our 1920 Fairbanks Morse [Autolite Type with ½" NPT thread]

A contributor to "smokestack forum" where we posed the question initially, says that as the modern plugs have unglazed insulators, these absorb combustion products, especially un-burnt hydrocarbons and eventually short to earth on the insulator.
If that's the case why can some engines burn oil and foul up their plugs with oil deposits but not suffer from insulation breakdown? ***J M.***

Harry Ferguson - A Brief History.

By ***Peter Noble.***

Harry Ferguson was born in Ireland in 1884 and at the age of 14 became an apprentice at a car and cycle shop in Belfast owned by his elder brother Joe. This was the beginning of his interest in all things mechanical, including aeroplanes.
He then established his own business selling various makes of cars, took an agency to sell Waterloo Boy model N tractors (the Overtime), and in 1917 the Irish government asked him to tour Ireland to help improve Ireland's tractors - the rest is now history.
From this he started making ploughs to attach to Fordson N tractors and developed a ploughing depth control which he patented in 1926 and called it 'The Ferguson System'.
He soon realised that no real progress would be made unless he persuaded someone to manufacture his own tractor and ploughs. He was not able to achieve this and in 1932 he set up his own factory producing the 'Ferguson Black". It had an American engine and the transmission was made by David Brown Co.
In 1936 David Brown agreed to manufacture the tractor known as the Ferguson Type A. They initially used Coventry Climax engines and after making 500 - David Browns' own engine. In the toolbox was the 'Famous Ferguson Spanner' that fitted the two sizes of nuts and bolts used on the entire tractor.
Various disagreements between the two men ended up with Ferguson going to see Henry Ford in America. Ford had stopped producing the Fordson N in America (still made in England) and after Ferguson demonstrated a Ferguson Brown at Dearborn they made an agreement for Ford to manufacture the tractor and implements and Ferguson would be in charge of sales and development. The agreement was sealed by only a handshake!
Ferguson broke his agreement with David Brown in 1939 and Brown then launched his own VAK 1 tractor. It is thought that 1354 Ferguson Browns had been manufactured.
In June 1939 the Ford Ferguson 9N was revealed to the public. Ford had also originally promised to manufacture the tractors at Dagenham, England, but WW2 intervened to prevent this and so Dagenham continued producing the Fordson N for the rest of the war period. They then went on to produce the E27N Major after the end of the war. Ferguson then started looking for a UK manufacturer and found the Standard Motor Company factory empty after it had stopped making 20,000 Bristol aero engines during the war.
Steel was in very short supply, but his contacts in 'high places' secured him enough to make 200 tractors a day and so the TE (Tractor England) come off the line in July 1946. Ford in America was still producing 9N's, but in 1947 he introduced an 8N using Ferguson patents and so the big lawsuit began. It took until April 1952 to be settled, costing Ford $9,250,000.
During 1949 100,000 tractors had been produced and held 78% of the wheeled tractor market in the U.K.
Fergusson merged with Massey Harris in August 1953. He soon fell out with them as he had with all his previous partners and he sold all his shares in the business to them in April 1954 for around $15 million and resigned from the company. When the last TE20 was built it was number 517,651.
The tractor had been sold around the world and Sir Edmund Hiliary even used some to reach the South Pole - the first land vehicle to do so. They were fitted with "full tracks' to enable them to manage it.

In my early working life I was a 'Ford man' as I had spent a year at the 'Henry Ford Institute of Agricultural Engineering'. The result of which is that I am very familiar with the inner workings of Fordson N and E27N tractors.
My first Fergie experience was at 18 when I had a job at a large estate in the U.K. The total tractor complement was 22 - five of which were TE 20's (Fergies or Vaaljapies as we know them *G*). They all had Continental engines and ran only on petrol. Conversion kits were eventually available.
I think that the 'Standard' engine was fitted after about 1½ years and the 6-volt system was changed to 12 volts after 4 years.
During the time that I drove my Fergie I remember doing one of those very stupid type of things that most of us have done during our lives and luckily survived.
The Ferguson 3 ton trailer - which we all used on the Ferguson pick-up hitch had 4 bolts securing the drawbar to the chassis - these bolts had a habit of coming loose and needed to be checked every two days or so. You could either crawl underneath or, more easily, get to the bolts when tipping the trailer.
Needless to say I always did the latter, until one day, when I had not noticed, the gland nut on the hydraulic ram had come unscrewed so that when the ram reached the end of it's first section it fell apart and the trailer body - still loaded - came crashing down onto the trailer seconds after I had moved away. One life down - I wonder if we all have nine as cats are supposed to have - and how many more I have left. ***PN***.

The pictures at the top of the article show the Fergy TE 20 (Vaaljapie) that was recently restored by Peter (before, after).

Restoration of a Crossley HD10 Engine. Compiled from a series of articles sent to us by ***Andy Selfe***.

The engine (1932, 40 HP) came from Standard Roller Mills in Caledon, we had to remove it quickly as the building had been sold, and because it was too big a job for any one of us, we made it a team effort of the Villiersdorp club, and this is how far we've got. They're a wonderful crowd.

This is what the engine looked like:

Since we last worked on the Crossley HD10 engine at Villiersdorp, the annual Fruit Season has intervened. Most of us are fruit farmers and work long hours at that time, so the project was shelved for a while. However in May, at a Club meeting, Eniel dropped a bombshell. He had planned and announced an Engine Day on 21st June, and had let word out that the Crossley would be started at that occasion! That was a tall order, impossible in any other place, probably in the world, except Villiersdorp! Remember when we had to remove the engine in a hurry, 15 people turned up?

The project looked straightforward enough, anyway. The stripped parts just had to be cleaned, painted and assembled on to the frame we had made. After all, it was a simple, single cylinder diesel engine, and although it had been flooded several times, we had noticed little damage as a result, probably thanks to the liberal coating of drained engine oil on which, we are told, it ran. Once again, teams of the right size were organised, first small ones to clean and polish parts, then larger ones when the assembly began, even bigger when the engine and frame had to be man-handled into position in the Museum, culminating in everybody lending a hand with the final assembly and presentation for the Grand Start-up!

Many skills were involved. Eniel did all the welding, none being done on used steel before one of us had ground off all the old paint from the area. Cleaning was done by any willing hand with wire brushing and hot high-pressure washing. Sand blasting of a few parts like the air receiver was done by Hansie. Most of the painting was done by hand, at least three coats of black metal etch primer, removing covers and painting them separately and polishing the nuts.

We decided to assemble the flywheel to the crankshaft and to refit all that to the block, already on the framework, before moving it as one unit to the Museum.

Moving it into place at the museum was well planned and in a short time it was in position.

This operation had to be done against time so that the base could be filled with concrete at the same time as a slab was poured in the corner of the museum for easier access for forklifts in future. During this day, I counted up to 20 people who came and helped, either physically, or as in the case of Mrs Nic, brought coffee and a huge container of sandwiches! The next week we were met with this sight:

Willem and Josmi busied themselves painting the flywheel, taking care to leave exposed the shipping details on one of the spokes. There was still a lot of assembly to do after this, but eventually it was looking more workmanlike:

Nic had been busy with the artist's brush and a pot of gold paint and by the end, that made all the difference to the appearance of the engine! Then various fluids had to be connected, fuel, water in and out, (and a tank frame made and tank installed) exhaust and compressed air. The air bottle, a long torpedo, still had a bit of air in when we removed it, but this was pressure tested and certificated.

During assembly, we re-checked the crankshaft alignment and shimmed and adjusted the outrigger bearing so that we had less than .001" deflection all round.

We did not dare leave it to the Great Day before attempting to start! Although we didn't admit it, we had started it the previous Saturday, then again on the following Monday which was a Public Holiday and again on the Friday evening before the official start up. Each time we had found and overcome several technical problems.

Most of the problems arose from the fuel injection system. First the main plunger was seized in its packing. Then all the packings leaked and as a result the governor (from which we removed one spring which brought the speed down from its rated 310 to 230 RPM) was unable to maintain the speed correctly. There are packings on the main fuel pump plunger and one each on the injector spindle and governor dump valve. Every time we got to a stage where there were minimal leaks, the governor could hold speed smoothly and accurately. When anything leaked, the governor hunted, as if saying, 'But I ***am*** giving you enough fuel!'

Another problem was experienced with the crude/distillate change-over valve which we thought was stuck, but actually we didn't understand how it works. It has a weighted throw-over handle which when flicked over towards the engine, opens a valve allowing the crude (in our case normal fuel, either diesel or illuminating paraffin) in from the main tank. If it is flicked outwards, it closes this valve and allows diesel to be drawn in from the small container on the engine, against a light spring-loaded mitre valve. If there's any restriction in the main supply then this valve is pulled open by the suction from the injection pump and it will be exhausted quickly and air will follow!

On the Friday evening, we tried to pump up the compressed air bottle. We had not overhauled the control valve for the air charging and admission. If we had, we might have overlooked the leakage between the upper valve and its guide. This bled air off profusely, making it impossible to charge anything more than 150 PSI (the gauge has a red line at 250 PSI). When trying to start, air was again being lost down the stem. At least we now understand how it works and can deal with its repair accordingly.

So, for the Great Day, we had to resort to belting the engine up to an International U4 stationary Engine brought along by Denis and this performed well. It has a clutch, so when the engine fired it could be disengaged easily and the belt flicked off.

However, there was a surprise in store! Harvey, whose family owned the building and mill at which the engine worked, mentioned that his cousin, Uncle Bert Metcalf, now in his late 70s had first been allowed to start the engine from the age of 14. He was asked to attend the Start-up, and to show us how he still remembered to set it in motion!

Uncle Bert was able to tell us stories about the engine, for instance, of how his father used to count the beats of the engine from his office, and if he didn't get 12 in any 5 seconds, he knew something was wrong!

Uncle Bert and Harvey Metcalfe

About 100 people collected at the Museum on the morning of Saturday 21st June. A few short speeches were made and the engine was set in motion, settling down to 230 RPM. There was a spontaneous round of applause and many looks of wonderment on the spectators' faces!

Andy and Eniel.

Finally, two very happy faces on the Main Conspirators! To those many people not mentioned here, many thanks, too, for your help. As I mentioned in my (short) speech, the restoration of an engine of this size is best tackled by a group. Apart from any work carried out in the week, all the work was accomplished in the space of just nine Saturdays. Best of all, we all enjoyed it so much, making fun of each other unmercifully! We also got to know one another much better, which is what a hobby is all about! ***Andy.***

Green People. From ***Phil.***


Phil's Mar-Vil.

Ron Wiley recently sent me a photo of a Villiers Century engine which is the 98cc version of the 76cc Villiers Mar-Vil. It reminded me of the one and only time I had been verbally abused at an engine rally. It was at ***Andy's*** show at the Peregrine Farm Stall, which coincides with the local flower show and attracts the passing parade to the Farm Stall. I was running my Mar-Vil, which admittedly is a tad smokey when not under load and maybe a double tad when it is working hard. I was approached by a pleasant looking young family who I thought wanted to ask about the engine or perhaps show their young children the strange noisy machines banging and popping. Little did I realise that I was about to be accosted by a tree hugger supreme who demanded that I switch off that disgusting cause of pollution with immediate effect. I was so taken aback (or perhaps in state of euphoria from inhaling too many unburnt carbons) that I couldn't think of an appropriate reply, but just looked for support to the tree huggers' husband. He had such a haunted, resigned look in his eyes that I knew I wasn't getting any support from him, so just politely asked the enraged female to seek entertainment from other quarters if she didn't like my engine. No, I didn't turn it off!

After relating the tale to Andy just after the event he reminded me that the apple trees under which our engines were running are used to having smokey old diesel tractors operating around them, in fact they are a hybrid variety that absorbs the oil rich air and deposits it as a waxy coating on the skin of the apple. Clever hey?

One of the other chaps there also had the comment that the greenies car would have pumped out more toxic pollution than the Mar-Vil on their way to the flower show. After all, the blue smoke is just heavy with oil which occurs naturally underground anyway. *I think this comment was a little harsh - maybe Mr and Mrs Green had walked to the show from Cape Town or wherever! G.*

Replies to NL5.

- A follow up on using modern oils for our old engines. Modern oils are rated according to an API (American Petroleum Institute) oil standard. S for petrol engines and C for diesel engines. The S rating has progressed up through the alphabet i.e. SF, SG, and SH etc and has now reached SM in America. Oils rated at the latest SM standard have reduced zinc and phosphorus content in an attempt to increase the life of catalytic converters fitted to most modern cars. Unfortunately older engines need these two additives to combat wear in camshafts. So look on the oil tin for a rating of SL or less and steer clear of SM oil. ***Phil.***
The other day I called at a Midas shop to get some SAE30 oil and was told that it is no longer available. I then spoke to my contact at our local BP depot and was told the same. SAE40 is still being produced. ***G.***

- In the last newsletter Gordon was regaling the problems with the dancing Wolseley and mentioned removing the spark plug lead in an attempt to stop the engine. I feel I must mention that this is not good practice. When the lead is removed from a running engine, the voltage increases dramatically in an attempt to jump the ever-increasing gap. It is a real possibility that this high voltage can overcome the old insulation of the magneto coil and short circuit or burn out the coil. Most magneto manufacturers were aware of this problem and built in a safety gap for the spark to jump across safely to earth but when last did you check your safety gap or is it even still there? So whenever cranking over a magneto ignition engine make sure the H.T. lead is on the plug or safely grounded to earth. ***Phil.***
Being duly chastened, I will make up a long lead with a remote cut-out switch that I can fit to over-energetic engines until I get them tamed. ***G.***

- Newsletter 5 - again well done. Out of balance Wolseley.

It can only be flywheels. There is nothing else to adjust. The fact that it gets St Vitus dance as you stop it tells me that one of the flywheels is ether wrong for that engine or is misphased on the crankshaft, so its primary balance is incorrect. Take a close look at the flywheels and note where the keys are. One may have a key re-machined in the wrong place. Alternatively try and swop the flywheels over drive end to non-drive end and see if this makes any difference.
What I have noticed with Wolseleys is that the flywheels are matched to the crankshaft and if you mismatch them the engine tends to have vibration problems. There is usually a serial number on the flywheel matching the engine block.
Balancing cranks and flywheels is quite scientific and the balancing needs to take place in three planes. The best example is balancing car tyres. If you can't get the problem right by swopping over the flywheels, then it's off to the crankshaft balance shop and don't forget the piston and conrod as well. ***John Menasce.***

- Many thanks for the vintage newsletters. I find them very interesting, printing them and filing them in a dedicated folder. ***Russell Flagg.***

Unusual.

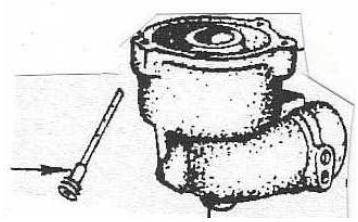
Starting engine/compressor

R***on Wiley*** was sent the following by ***Kerry Young*** in New Zealand: *The 'find' is an Allen 6 cylinder diesel engine of venerable years, used by the Christchurch City Council to pump water to our reservoirs. At this time, I have no definite timelines for this setup, but very roughly indeed, it is guessed to be an engine from the early 1930s which saw continuous use until probably in the 1970s sometime, when it was shut down and left, other than an occasional start in the following few years.*
It is a six cylinder in line vertical engine of very large capacity, 440bhp @ 415 rpm. What had me intrigued was the starting engine/compressor unit made by Hamworthy, I am going to write a story about it as the engine is one of the most interesting two-strokes I have come across. I have attached a picture that I hope will be of interest to you?

Up for Grabs.

I have an original Owners Manual, Spare Parts Manual and Engine Manual for BCS Walk-behind Tractors - Models 715 - 725. The engine manual covers 'Acme motori'' engines ALN215w/290w/330w - AL290vw/330VW. *Gordon.*

Help!



I am busy working on a Type B Briggs & Stratton and was **fortunately** warned by ***John Menasce*** that the jet/venturi tube at the bottom of the carb has to be removed before the top can be taken off. Without this warning I think a 'nasty' would have occurred. My problem now is that the jet is sitting 'vas' and in spite of repeated applications of penetrating oil I have been unable to remove it. Does anyone have a magic formula - I cannot afford to break the *$#% thingy. *Gordon.*

Also seen at the WWU.

Ransomes MG (market garden) crawler, fitted with Sturmey-Archer engine. This crawler outsold any other make in the UK during its production run.

Braams **Studebaker called a Rockne. The contraption mounted on the back is a Briggs WMB and small feed mill. The WMB was developed to power domestic washing machines.**

Steve **next to a Nash pick up (an after market conversion) reputed once owned by Oom Jan Smuts**

Steve Sokolics' Sachs (picture in Bill's article) - Steve made the rings himself. He is quite casual about the fact and said that it was just a practise run prior to making rings for a Wolseley, but I suspect it is not all that easy. I am going to twist his arm and try to get him to write us an article about the project. *G*.

Brought along by ***Bill Raber***, a small Turner ½ hp. Look at the spark plug Bought as a kit of parts by Bill's dad bedroom over eighty years ago. The which was made by Mr Raber Snr.

power engine thought to be a Stuart top left to gauge the size of the engine. and machined in the "then" young Bills kit arrived minus the piston and block

Don't miss the Heidelberg Show 22nd and 23rd August.