

TOOLBOX



OKTOBER/OCTOBER 2014



LID VAN VETERAAN MOTORVERENIGING VIR SUIDER AFRIKA (SAVVA)

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DAGSÊ VRIENDE / GOOD DAY FRIENDS

Wil net vir die wat die afgelope maand siek was voorspoed toewens met julle gesondheid. Lydia, hoop jy herstel gou en dat hulle sommer nou klaarspeel met die probleem. As nierstene nou diamante was, sou jy skatryk gewees het met baie ou karre. Oom Duimpie, ons hoop dit gaan ook goed daar en dat julle die ruskans by Aldam geniet het.

Volgende maand is weer stem-tyd. Maak asb seker dat nominasies vroegtydig ingehandig word. Ek vra net weer dat lede wie se ledegeld uitstaande is asb buite stemming sal bly volgens ons konstitusie, of alternatiewelik sal sorg dat hul lidmaatskap in orde is voor dan.

Jaarprogram /Yearprogram

- 4 Oktober – Welkom Cars in the Park
- 25 Oktober – NG Kerk Morelig Mengelmoesfees
- 1 November – Polo & Lifestyle show - Harrismith
- 6 November – Maluti Algemene Jaar Vergadering (AGM)
 - Annual Concours Judging
 - Year End Function

Gelukwensings /Congratulations

Verjaarsdae/ Birthdays

- 1 Okt Kevin Schroeder
- 7 Okt Jimmy Dawson
- 19 Okt Richard Lewis
- 22 Okt Florence Knoetze
- 24 Okt Sakkie Bell

Baie geluk aan die volgende lede wat verjaar. Mag julle 'n vreugdevolle en geseënde jaar hê! .Ons wens elkeen van hierdie persone sterkte toe vir die jaar wat voorlê en verseker hulle van ons deurlopende ondersteuning!

Erfenis dag / Braaidag / Drive-it Day

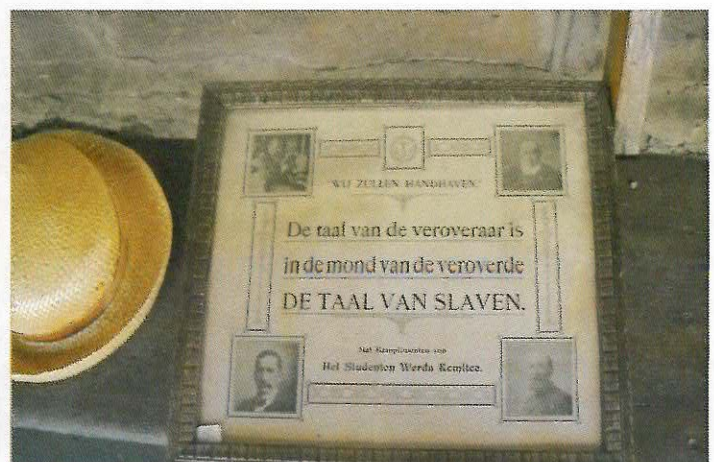
WAT JY VANDAG DOEN IS MORE SE ERFENIS

Tertius het himself weer oortref met al die vrae en hier teen die einde was almal se gô uit en wou hulle net braai. Ek wonder wat het mense gedink toe ons daar by die begraafplaas rondhardloop op soek na 'n gedenksteen?

Ons het weggespring by Ocean Basket en toe besef ons dat jy bly al jare hier, maar weet nie eers van alles wat hier te sien is en van Bethlehem se geskiedenis nie.

Ons het by Ina van Rensburg gestop by die Zendeling Huis. Haar oupa, eerwaarde H A Roux, het die plek laat bou. Daar was net 2 buitekamers wat hy gekoop het van die aangrensende Moederkerk pastorie. Hy was die eerste sendeling in Bethlehem in 1882. Hy het op 1 Oktober daar ingetrek en op 11 Oktober het die oorlog begin. Hy is na Ceylon eiland toe as krygsgevangene verban en sy vrou in 'n konsentrasiekamp in Harrismith geprop.

Al die Boere se goed is afgebrand behalwe die Engelse s'n en Ina het nog 'n stoel met brandmerke op. Dit is al wat oorgebly het. Na die oorlog het hy Louis Ferdinand Le Seur saamgebring vanaf Ceylon. Hy was 'n Kriool. Destyds moes jy 'n ambag hê om in die land toe gelaat te kon word. Louis kon niks doen nie en toe het haar oupa gesê hy moet na 'n sekere klipkapper kyk en hom dit nadoen. Hy het toe onderneem om hom werk te gee hier in Suid-Afrika. En so het dit gekom dat hy verskeie plekke in en om Bethlehem gebou het met sandsteenklippe wat hy hier gekap het. Die buitemure is met sandsteen gebou en die binnekant met strooi, gras en klei.



Na nog verskeie stoppe is ons na Cassie Jonker om na sy oorlog-versameling te gaan kyk.

Hy het al van standard vier af begin om dit te versamel en dit is 'n ongelooflike versameling wat hy het. Hierna het ons lekker gebraaai en gekuier by Loch Athlone.



Groetnis
Dircolene

SAVVA Technical Tip 87: 6 – 12 volt conversions

Many articles have been written regarding the advantages/disadvantages of converting early cars from 6 to 12 volts, including a few SAVVA Technical Tips. This article was written by auto-electrician Len Ward who is a member of the Crankhandle Club in Cape Town. Len is an expert with early car electrics and has summed up the situation of whether or not to convert and we agree with him all the way.

Thank you Len.

"Firstly it must be remembered that 16-cylinder Cadillac's and Marmon's and 12-cylinder Lincolns would start in winter in Chicago and Winnipeg and in summer in Miami so there was no lack of cranking power. So if your 6-cylinder Dodge won't start in Cape Town, there is something wrong. The most common cause of weak starting is old battery cables where the lugs were crimped onto the ends some 60 to 80 years ago and corrosion inside the lug has caused a minute amount of resistance. It only needs one fiftieth of an ohm to require 5 volts to push 100 amps through such a joint leaving only 1 volt to drive the starter. It just won't work.

Another point of resistance is corrosion between the earth cable and lug on the chassis. Also if the starter has been abused with difficult starts in past years, the armature has probably "thrown lead" (= melted the soldered joints around the commutator) and has short circuits in it and the field windings may have shorts between turns or to earth. In this case converting to 12 volts will work for a while and then burn out the starter.

I don't like subjecting 6 volt starters to 12 volts. If you have a pre-engaged starter - either by pedal or solenoid - it should be okay, but if your starter is of the inertia engaged type without a nose cone to support the pinion end of the shaft, the shaft can be bent by the now furious impact of the pinion with the ring gear. I have also seen sections of teeth chopped off the ring gear. I have seen it all and got the t-shirt.

So, what caused the motor industry to eventually drop 6 volts and concentrate on 12 volts? First let's go back in history. The last 12 volt American car in the old days was the Franklin in 1922. Then they decided to standardise with the rest of the industry on 6 volts. Then in 1932 when Henry Ford produced his high revving V8, the spark intensity began to weaken from 2000 rpm until at 3000 rpm there was not enough voltage to keep the engine going.

So, what causes this? Now when the points close, the current in the coil primary winding takes about 8 milliseconds to build up to its maximum, owing to the natural inductance in a coil. Thus, if you have 8 cylinders doing 3000 rpm, the coil must produce 12000 sparks per minute or 200 sparks per second or 1 spark every 5 milliseconds.

Since the points can only stay closed for half that time, there is just no way that the coil has the time to generate a decent spark. So Henry's boys found that if they used a coil with a primary winding of very low impedance (a combination of resistance and inductance) they would get spark at high revs, but this coil drew more current than the points could switch, - they just got chowed. Then putting a resistor of about 0, 8 ohms in series with the coil reduced the current to about 3.5 amps which the points can handle. (Why that is called "ballast" resistor, I don't know.) So a low impedance coil with a ballast resistor can get you sparks at high revs, but there is a limit.

So what caused the industry particular in the USA to go for 12 volts?

The answer is the horsepower race of the early 50's. For high power you need two things: cylinders and revs. It is a fact that the build-up time for the current in primary winding of a coil at 12 volts is much shorter than for a 6 volt coil. So with V8's now doing 4500 rpm they just HAD to go to 12 volts. Ford held out on 6 volts through 1956. As an inside, some of you may remember the BRM racer of 1951 with 16 cylinders. It produced 600 horsepower at 12000 revs - they had to resort to 4 coils and 4 distributors!

Converting to 12 volts

If you decide to convert your vehicle to 12 volts, you can keep your 6 volt coil if you put a resistor of 1, 4 to 1, 6 ohms in series with it or you can just fit a 12 volt coil. So why did a number of modern (pre-electronic) cars have ballast resistors? Take a well-known typical example of the Nissan 1400 pick-up: this was for more certain starting. While the starter is cranking the engine the battery voltage usually drops to about 9 volts with a consequent weakening of the spark. So there is a "cold start contact" on the starter solenoid which by-passes the ballast resistor giving the 9 volts of the battery to the 9 volt coil so that there is no loss of spark during cranking. So in conclusion, if you have a V8 and you want to do 6250 rpm with points, you will need a special low impedance coil with a suitable ballast resistor, but these days ignition can be more effectively handled by an electronic system. In fact, most modern V6's and V8's have a coil for each cylinder. No problem.

Generators

Some guys just leave the 6 volt third brush generator in circuit to work on 12 volts. Yes, this will work for a while, but I reckon if you do a long trip the field windings will probably burn out. A 6 volt generator can be rewound for 12 volts. A

sort of general rule is that both the armature and the field windings will need about one and a half times the number of turns required for 6 volts. It may just be easier to fit a 12 volt generator and a regulator, but be careful here, ask a specialist before trying to make a mixed marriage between Bosch and Lucas. Most American (not all) and European generators work the opposite way round to British ones.

Alternators

It is said that alternators give performance superior to generators. Hang on, it's not that simple. Firstly, from a given occupied space, an alternator will give more output and all modern alternators have built-in regulators, which simplifies the wiring. The main advantage of an alternator, however, is that there is almost no limit to its rotational speed, whereas if a generator is turned too fast, centrifugal force will fling the windings out of the alternator slots and/or burst the commutator. Therefore an alternator can be fitted with a pulley half or quarter the size of the crankshaft pulley so that it can turn fast enough at idling speed to generate enough current to supply lights, fans, rear window demister and wipers, which is important in modern day traffic, but an alternator looks really out of place on a vintage engine. I once saw a 1929 Model A Ford in America with a 6 volt alternator. Ugly!

Bulbs

All the 6 volt bulbs are available - if not from your local Midas outlet. All the old headlight bulbs are available in 6 volt halogen. I don't keep them in stock because they're expensive and demand is minimal. Since it is highly unlikely that you will use your 1936 Morris 8 or 1938 Chevrolet to regularly commute between Laingsburg and Beaufort West on moonless nights at 180 km/h, you won't need them. If you can't see around town at night, for heaven's sake get your headlight reflectors re-plated. Don't chrome them, chromium reflects very poorly. Silver gives the best reflection, aluminium is the next best - all modern cars use it and make sure the bulb filaments are on the focal points of the reflectors.

On a 6 volt car it is important to ensure that the lamp holders are properly earthed. Solder a wire on to the lamp holder or reflector and take it down onto the chassis or even back to the battery ground terminal. If you still can't see, then you MUST STOP driving at night.

Gauges

Putting a resistor into the circuit is not satisfactory. This may give an acceptable reading at one end, but not at the other. The best way is to put an electronic voltage reducer into the wiring system to give between 6 and 7 volts to the fuel and temperature (if electronic) gauges. These reducers are available from Communica in Woodstock. There must also be places in Gauteng and Durban that can supply them. Ammeters read current not voltage so need not be interfered with, but if you change from positive earth to negative earth the connections to the ammeters must be reversed.

Lastly, Batteries

A characteristic of the lead-acid battery; 6, 12 or 24 volt is that it discharges internally at 1% per day and there is nothing that you or the illuminati can do about it. Disconnecting it when car has to stand for a few months will make no difference at all. What you can do is get one of those "Optimate" intelligent battery chargers from Dave Alexander.

Conclusion

Well, I've given you the facts of electrical life as I know them. You want to convert to 12 volts? My recommendation is: don't do it - unless you do a lot of driving and you can't go without CD players, iPods, USB pods, GPS, hands free cell phone kits etc.

Over to you.

STOP PRESS: I have just received the info that alternators are now available which are cleverly engineered to exactly resemble the Lucas C40, C42 and C45 range of dynamos, and the old Bosch generators for VW, Opel, Mercedes-Benz etc. They cost in the region of R6000 to R7000. Take your pick."



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