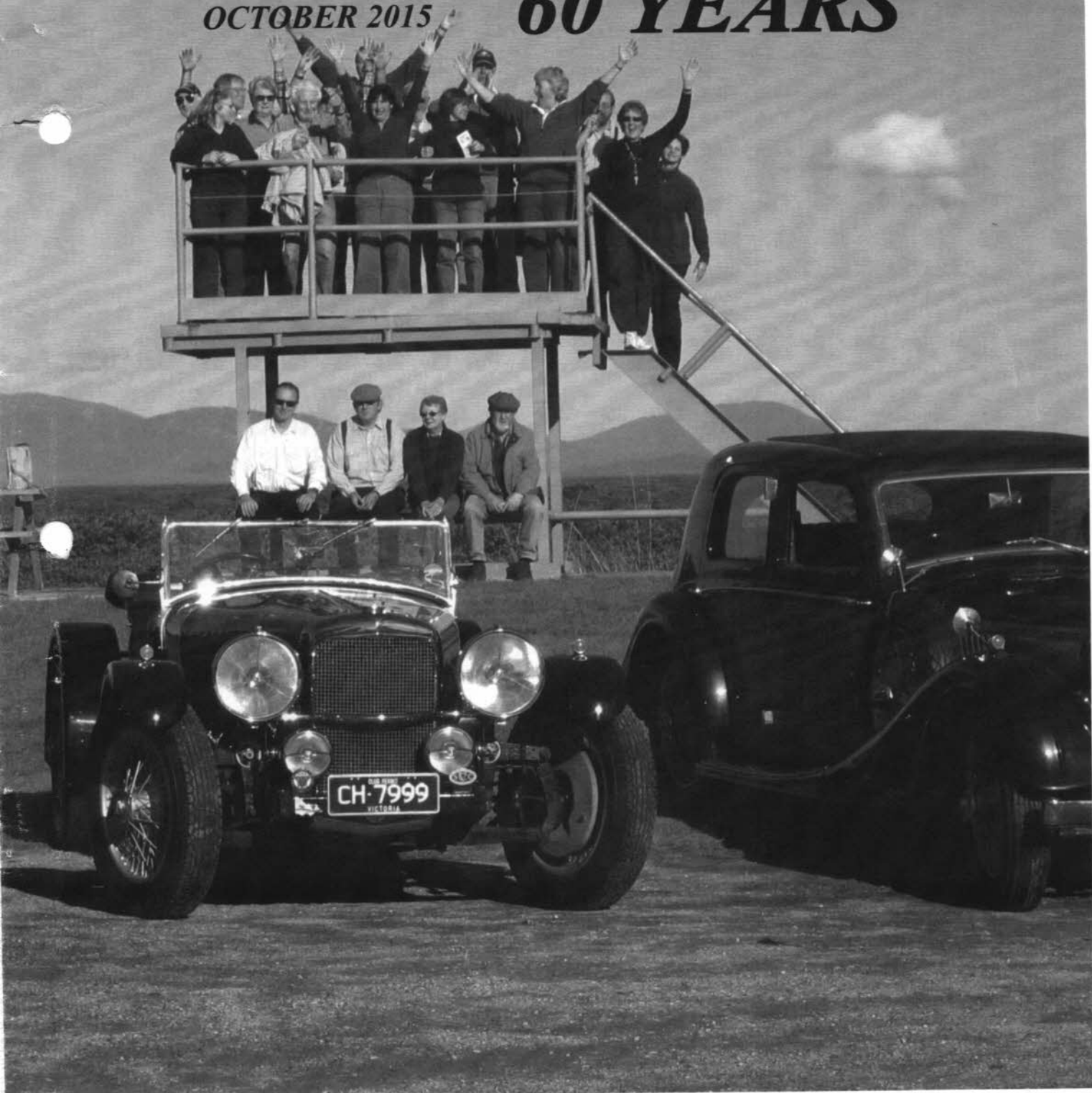


Alvic

The Newsletter of the Alvis Car Club of Victoria

OCTOBER 2015

60 YEARS





Alvis Car Club of Victoria (Inc)

A0017202F

CLUB ROOMS: - rear of 'ALVISTA' 21 Edgar St, Glen Iris
(MELWAYS 59 F8)
Meetings—third Friday of each month [except DEC/JAN] at 8.00pm.
Newsletter Deadline - first Friday of the month.
POSTAL: ACCV P.O.Box 634, EMERALD, VIC 3782
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October 2015 VOL 54 ISSUE 8

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SUPPER

**AS HAS BEEN THE TRADITION
AT THE AGM, MEMBERS ARE
ASKED TO BRING A PLATE OF
SUPPER. DRINKS PROVIDED.**

2015 COMING EVENTS

- Oct 16 **AGM & Awards Presentation**
- Nov 8 **Combined outing with the
Jowett Club to Maldon**
20 **General Meeting**
28-29 **Geelong Revival**
- Dec 6 **Christmas Party - the Langs
ALL WELCOME
64 Kirribilli Rd, New Gisborne
from 11.00am.**

**Peter Miller has agreed to let all interested
persons to view some of the work he is
doing in his workshop (next door) -
Speed 25/Delage/Chev etc.**

Front page:

**Guess who has run out of suitable photographs for
the front page.**

**In our 60th Year it is opportune to remember some of
the fun times we have had and fun places we have
been!**

**Any takers to remember where and when this
photograph was taken!**

**I will find some more of these and find a suitable
prize for the first correct entry on each occasion!**

*When I start putting the Lang cars on the front page you will
know I am really desperate!*

PRESIDENT'S REPORT

Since our return from overseas it has been a busy time and is continuing to be so. Of course a few days after returning we were off to the fantastic Metung weekend which I talked about in last month's report. This was followed by preparing Frances' 1913 Ladies Douglas motorcycle for the up coming National Veteran Motorcycle Rally to be held in Ararat. On looking to see why it wouldn't run the last time when we tried it 18 months ago, I found that it had run a big end bearing, so hastily I embarked on a full engine rebuild. Fortunately the crankshaft wasn't too bad and I had sufficient parts on hand to replace bearings, fit new rings and grind in the valves. The reason it refused to start was a blocked jet in the carburettor. So the bike was back together but untested in time for the rally. I have to thank Alan McKinnon for helping me to fit a very tight new beaded edge tyre to the front wheel.

My motorcycle, a 1914 V twin Matchless, had also received extensive mechanical attention and was also untested since the engine and gearbox rebuild. In the mean time I still have an old Mitsubishi van which is lent to a friend. Whilst parked on the street someone decided they wanted to take it and in so doing made a mess of the wiring around the ignition switch, ripped off the horn button, ripped out the rear vision mirror in frustration and snapped off the dip stick to try and use the broken end as a key in the ignition switch. The would be thief was unsuccessful due to an immobiliser and a flat battery. So a few days were taken up repairing the damage. It is now back on the road but still needing a replacement dipstick!

Last week was spent in Ararat on the motorcycle rally. The event is held around the states by rotation every two years. We had a great time with 120 other riders and with a fantastic array of over 150 pre-1919 motorcycles. The countryside looked a picture and we enjoyed catching up with a great bunch of people and riding on quiet roads. Pleasingly both our bikes ran well, with Frances' Douglas running the best it has in our ownership. We left the engine covers off to aid cooling of the rear cylinder which was beneficial. Unfortunately the Douglas failed a few kilometres from the end of the run on the final day with a broken primary drive chain – only a small issue.

We are currently home for a week, which coincides with our AGM and Awards Night, before we leave on Saturday to take our 1909 IHC high wheeler buggy across to Hahndorf for a week long national rally. I am sure we will have a great time catching up with friends and driving these archaic vehicles on quiet roads and visiting picturesque towns in the Adelaide Hills area.

As I mentioned above, this month our regular clubroom meeting will also be our AGM and Awards Presentation night. It will be good to have as many people along as possible to witness the recognition of members' achievements. As we have not been bowled over in the rush with members wishing to join the committee, the existing members of the executive and committee have indicated they are prepared to renominate. Of course we will welcome having some new blood join the committee.

We can accept nominations on the night. The work load is not at all onerous and we have a lot of fun when we meet, which is only four times a year. This meeting is BYO own nibbles catering, however we do have on hand some wine and drinks left over from our 60th Anniversary Dinner celebration, so there is no need to bring anything to drink.

We will also be taking the opportunity of unveiling the new ("old style") bookcase which contains our Alvis related library books. The bookcase has been generously donated by Joan Henderson and Family and it is a fitting recognition of Roy (Royboy) who did so much for our Club over many years.

If you can make it, please join us for a meal at the Malvernvale Hotel prior to the meeting and let me know, by phone or email, by Wednesday evening so that I can book a large enough table.
Andrew McDougall

STEVE TILLYER

Australian Alvis UK travellers will be aware that Steve Tillyer lost his long battle with cancer following the AOC International Alvis Weekend.

This year the ALVIC trophy was awarded in absence, to Steve and Jenny Tillyer for their work over many years for the Club and the Midland Section right up to researching the location of next year's event. Steve battled on despite his illness to compile design and complete the splendid Event Programme



IMPORTANT NOTICES

SUNDAY 8TH NOVEMBER

We are having a short weekend away at Castlemaine.

Accommodation has been booked at the Campbell St Motor Lodge for **Saturday 7th Nov**. Group dinner at the Railway Hotel.

On Sunday 8th November we join with the Jowett Club and several other clubs to ride live steam from Castlemaine to Maldon for lunch and return.

Details on page 16.

Accommodation has been booked for :
Weller, McDougall, Mackay, Hetherington,,
Higgins, Bosanquet, Lang.

If you would like to join us contact Langs on
54262256 or jdmelang@bigpond.net.au

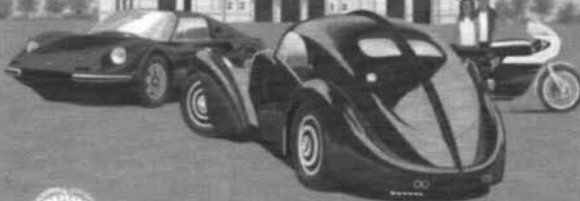
GEELONG REVIVAL

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GEELONG REVIVAL SAT 28 & 29 NOVEMBER

Short weekend away

Saturday we meet in Geelong for a trip to Queenscliff and lunch at the Cafe Gusto in Hesse St (*north end main street*) at midday.
Dinner in Geelong **Saturday** night
Accommodation **Sat** booked for McDougall, Weller, Tonkin, Higgins, Williams & Lang.
Sunday - cars on display at Geelong Revival.
McDougall, Weller, Tonkin, Higgins, Concannon, Grey, Willingham, Lang.

All welcome - need to know you are coming.

MOTORCLASSICA

Richard Tonkin's Graber is representing the Alvis marque at MotorClassica this year.

If you would like to pre-purchase tickets for a saving of \$5 - see over print on the flyer for details.

IN THE WORKSHOP

BIG RED RUNNING ON WATER!

I think many of us drive our Alvises, aware in the back of our minds that one day we might have a breakdown and last month, Peter & Jen had their share on the way to Metung for the weekend away.

Prior to the AAA run last Sunday, I decided to fill "Big Red" up with petrol in anticipation.

On driving back into the garage I became aware of what I thought was oil smoke coming from the offside exhaust.

The twin system has no balance pipe and this identified a problem in one or more of the front 3 cylinders.

The following day, I checked the plugs to look for a sooty individual. All OK. Started the engine to see if shorting a plug might identify a problem. Lots of smoke - no change to the idle for a 5 cylinder check.

Removed the plugs - number 3 was wet - not petrol but water!

It is very nice to have a friend and neighbour like Peter Miller who came down to see if between us we could trouble shoot the problem.

Started the engine and it became obvious that the smoke was steam. This was confirmed.

After a short engine run, Peter determined that spark plugs 2 and 3 were cool compared to the others indicating that they were doing little or no work.

In trying to determine the source of the water, it was found that #2 also had the problem as there was a little coolant on one of its sets of valve springs. A compression test on all cylinders showed all between 120 and 130.

Compressed air was introduced into one of the offending cylinders and air could be heard at the exhaust pipe. However when the cylinder was set to compression TDC it was obvious that the exhaust valve had been open and that the exhaust was not a relevant indication.

The radiator contents had been observed for bubbles when the engine was running and this was inconclusive although later indications with the compressed air produced some bubbles and froth.

With the head off, it became apparent that there was a problem with the head gasket in the vicinity of the block core plug adjacent to #2 & 3 cylinders.

It would appear that the composite head gasket which was one I found behind the back seat and was fitted about 3 years ago, did not like getting wet and deteriorated enough to allow water into the cylinders from

the failing core plug.

A decision was made to remove the block and replace all the core plugs.

The core plugs had been "checked" 3 years earlier and deemed OK. I was told that a tap with a ball-peen hammer was a method used. Not for me! I used the hammer on several cores I was going to take out anyway and none were identified as suspect that way, but were obviously not going to last much longer.

The plugs in the bottom of the block had been replaced 10 years ago and when I inspected the underside of the one at the front of the block adjacent to the fan mounting area, it was in good condition and because of the difficulty I had had getting some of the other plugs out, I wondered if I was about to do unnecessary work.

Fortunately I removed all the others. Two were like cheese and the others quite badly corroded.

Maybe the experienced automobile engineer has an easy method of taking out core plugs, however I spent many hours getting them out. Obviously first method to try was a hole in the middle of the core and an Easyout. None were successfully removed this way as the Easyout simply increased the size of the hole as the aluminium was too soft to take any torque.

When I finally came up with a quick method of removal I only had 3 of about 20 left to take out. I found if you can remove a segment of the core, the rest is relatively easy to remove.

Large hole in the middle and 2 smaller ones radially at 60 or 70 degrees between. Break out the material between the large and small holes, then use a hand held hack saw blade and isolate a quadrant. The hack saw will change in sound and feel, the moment you touch the cast iron thread. A triangular rats tail file used in the hacksaw cut will make it easier to remove the segment. Tap the segment adjacent to the large hole with a light hammer and punch and remove the segment. You may need to remove another segment in the same way, however on several occasions once the first segment was removed the remainder unscrewed.

Pressed for time, I decided to replace using brass plugs. Most of the plugs were 5/8 BSP and I found that modern brass plugs are hollow which would not allow the removal of the hex head and still retain the coolant.

My local plumbing supplier told me that 5/8 BSP is not a plumbing size and I had to source them elsewhere. Also there are some odd sized holes which might mean honing my screw cutting skills (?) and make some plugs.

The project is still proceeding with the need to remove the valves, fit the new plugs to head and block, skim both the head and the block and pressure test both.

For an engine that had block and head cleaned during major work 3 years ago, I was surprised how much debris was in the block. To me it looked like casting sand, however Peter suggested it was probably the debris from the corroding aluminium plugs.

The photographs below show some of the project.

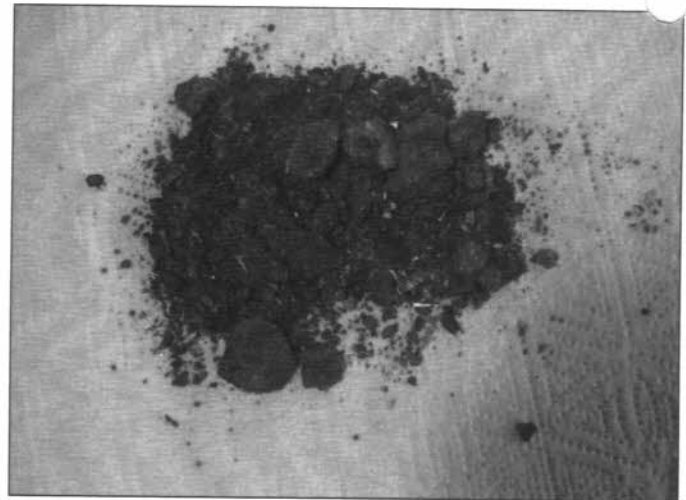
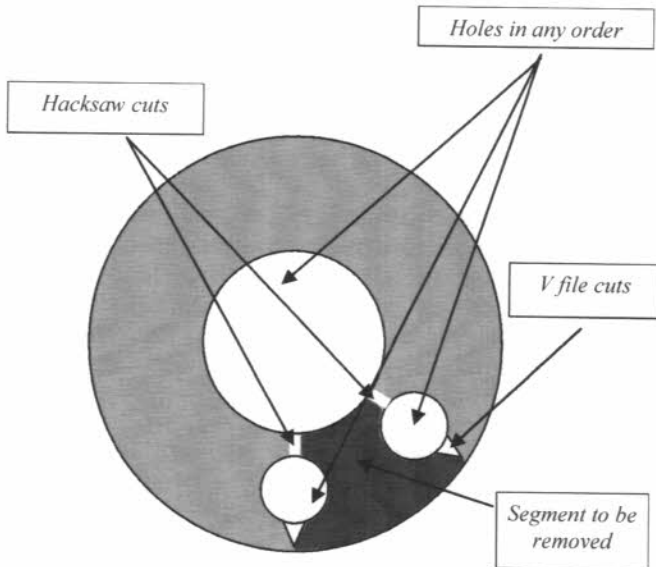
Many thanks to Peter Miller for his ongoing help and also to the Treasurer who would much rather work in the garage than the house, for her assistance.

..... John Lang

To be continued



The block with 6 of its plugs removed



*Above: Debris
Below: badly corroded plugs*

Obviously there will be some smarter mechanics than me who may have a much better method of removing core plugs than mine.

However this worked for me.



That Bloody Gearbox

(Or How I Learned to Stop Worrying and Love Murphy's Law)

Ray McKenzie

It is with some reluctance that I write of my experiences with the ENV 75 Pre Selective Gearbox fitted to my Alvis Firefly. My main fear is that I will not be able to continue without using words which would preclude the article from inclusion in any magazine or newsletter claiming to be a 'family' publication. I am also hesitant to proceed as I must endure some embarrassment in exposing my own shortcomings when dealing with the technical problems associated with this device.

From the earliest days of motoring history it was clear that the internal combustion engine would operate efficiently only over a limited range of revolutions per minute. To start from rest and then proceed at a useful speed, some method of changing the gear ratio between the engine and the driven road wheels, while in motion, is required. Many methods of achieving this were tried. Among them were fast and loose belts on differently sized pulleys, belts moving on conical pulleys, chains, friction wheels and others. Better results were achieved with the development of the pedal operated clutch and closed gearbox utilising sliding gears running in oil and protected from the road grime, but requiring some skill to operate.

Another popular method was the use of the epicyclic or 'sun and planetary' gear with the drive initiated by a brake band closing on a drum holding these gears, which was also introduced quite early. Probably the best known of these was the transmission of the popular Model T Ford. It was claimed of the Model T that "Any darned fool could drive it" and for those early motorists whose only aim in using a motor vehicle was to move to another place without the aid of a horse, the simple pressing of a couple of pedals was far easier than learning to handle a standard sliding or "crash" gearbox properly and quietly.

By the mid 1920's the mere two forward speeds provided by the Model T gearbox was outdated; indeed any later Ford T's were fitted with a two speed rear axle to provide four forward ratios.

In most of the larger motor manufacturing countries, including Britain, the generally accepted standard was now a crash gearbox with three or four forward speeds. British passenger cars usually used four speed gearboxes in more expensive and/or higher performance models. Three speed boxes were more likely to be found in smaller or cheaper vehicles.

A disadvantage of the crash box is the time required to change between ratios, when a competent driver must pause and/or "double declutch" and at the same time operate the accelerator, to cause the driving and driven gears to rotate at a similar speed to enable them to be engaged quietly and without damage. This delay is especially galling if one is competing in racing, or other timed motoring event. Much admiration was assigned to those drivers who became proficient at "racing changes," when the gear change was completed in a single quick movement, with the assistance of the accelerator only and without the use of the clutch. This was a skill much easier to learn if the vehicle being driven belonged to someone who was not present.

A solution for the ordinary motorist having trouble with the slowness and noise generation of the ordinary crash box and for the competitive driver, was offered by Major Walter Gordon Wilson with his patented Pre Selective Transmission. This gearbox employed a series of the familiar epicyclic drives, associated with a new selection mechanism. Driving with this gearbox became simplicity itself, requiring one to merely select the required gear on a simple quadrant located on the steering column or on a gearbox extension and then engaging that ratio by operation of the "change speed" pedal which replaced the conventional clutch pedal. The next gear required could be selected with the vehicle in motion and then engaged with said pedal when required. Once moving, the speed of the change was dependent only on the speed with which one could operate the change pedal, a great assistance in competition.

The majority of Pre Selective gearboxes had four forward speeds, with reverse, first, second and third speeds using epicyclic gears and a contracting band. The fourth or top gear used a cone clutch to provide direct drive.

Pre Selective Gearboxes were produced in a number of sizes, from those for use in small cars of around twelve horsepower up to large units for use in a range of commercial vehicles. They were popular for use in public busses, which stopped frequently to pick up and let down passengers and for urban delivery vehicles. They were also used in Military vehicles, notably the Ferret Scout Car. Most of the gearboxes for commercial vehicles were produced by W G Wilson's own company Improved Gears Ltd, later becoming Self Changing Gears Ltd, a world-wide company.

The Pre Selective transmission was adopted in the early 1930's by a number of British car manufacturers, either as an option or a standard fitting. Among them were Armstrong Siddeley, Daimler/Lanchester and Talbot who manufactured their own transmissions under licence. Component manufacturers, particularly ENV, produced the gearboxes, also under the Wilson patents, for use by other vehicle manufacturers.

Many passenger cars used the gearbox in conjunction with a fluid or centrifugal clutch which made driving even easier and greatly reduced the wear on the gear band linings which were then not required to take the entire load when moving off.

ENV supplied car manufactures such as Alvis, MG, Lagonda, Riley, Crossley and others with a range of Pre Selective gearboxes specially adapted for their various models.

The Alvis Firefly SA 11.9 was first released midway through 1932. It was initially supplied only with the Alvis four speed crash gearbox. This included a clutch shaft brake to assist with gear changing. To take advantage of this, drivers needed to learn to push the clutch to its full extent to utilise the clutch brake on the upshift, but to limit the pedals travel, to negate the clutch brake operation, when double declutching for a downshift.

In early 1933 the Firefly was offered with the option of an ENV 75 Pre Selective gearbox, priced at an extra GB £15. This option clearly made driving this vehicle much easier.

The ENV 75 was designed by Brian Wilson, the son of the patent holder Major W G Wilson. This gearbox was the smallest of the ENV range. The unit used in the Firefly was new and had some design changes during its life, notably an early change to the mechanism operating the top gear cone clutch.

Sadly, the Firefly did not include a fluid or centrifugal clutch with the Pre Selective gearbox option. The reason given for this was that others held the patent rights for this arrangement and Alvis, as a smaller manufacturer, could not afford to pay for or risk a legal action if it was seen to infringe this.

The connection between the flywheel and the gearbox consisted of two fabric couplings on a short shaft. This meant that moving off required the drive to be taken up by the first gear band lining.

The ENV 75 gearbox appears to have really been intended for use in a small car with lighter bodywork. Variants were used in vehicles such as the Riley Nine, Lagonda Rapier and Crossley Regis with some success. Being of less than 1.5 litres capacity, the Alvis Firefly was, by definition a 'light car' but actually had a reputation for being a fairly heavy one. When fitted with saloon bodywork, which most Firefly chassis originally carried, the combination was clearly at the outer limits of the ENV 75 gearboxes capability.

It was initially well received by sections of the motoring press, but records indicate that some drivers experienced troubles with the new gearbox.

It is probable that many of the problems experienced involved slipping in either an intermediate or top gear and possibly could have been corrected by adjustment if they could have been attended to by a person familiar with the gearbox as soon as they became evident. If however, it was allowed to continue slipping, the heat generated would cause damage. This would then require the car to be taken off the road and have the gearbox removed for repairs to be made.

Alvis Chairman and Managing Director, Thomas George John was reported to have stated in a board meeting that this transmission "is not without problems." He later went on to say that ENV would be supplying a new model that was expected to be reliable. It seems probable that he was referring to the future change to the larger ENV 110 gearbox, rather than a design change to the ENV 75.

One can only sympathise with those 1930's purchasers of an ENV 75 equipped Firefly experiencing gearbox problems and watching from the sidelines while Alvis developed their very successful four speed all synchromesh gearbox, used in most of their larger cars in the 1930's.

Such were the problems that the Alvis Firefly chassis was modified to have the brake cross shaft moved further back in the chassis to allow the installation of the larger ENV 110 Pre Selective gearbox. This was much more capable of handling the load imposed by the willing little engine and weighty bodywork. The adoption of this gearbox obviously produced a much more reliable vehicle. Only after a number had been sold with the new gearbox was the modified model referred to as the Firefly

SB 11.9. The last Fireflies sold in 1934 were equipped only with the ENV 110 Gearbox, with the now outdated crash box option being discontinued entirely.

It should also be noted that the Firebird, the slightly higher capacity four cylinder Alvis which followed the Firefly, was sold only with a four speed synchromesh gearbox, with no option of a Pre Selective transmission being offered. At this distance we can only speculate if this was driven by their confidence in the synchromesh gearbox, or if they foresaw the demise in interest in the Pre Selective transmission in passenger cars, even though others continued to use it up to the middle 1950's. Alvis other notable use of the Pre Selective gearbox was the even larger ENV 150 offered in the Crested Eagle.

My own experiences with the gearbox began with the acquisition of my 1933 Alvis Firefly in extreme kit form. I felt at the time that one bright spot was the fact that the gearbox at least was in one piece. As the (very long) restoration proceeded, I read up as much as I could find on the Pre Selective gearbox, most of which was referring to the larger models and makes other than ENV. As it was at that time, the pre Internet age, I had to rely on the hard printed information then available. Publications such as Newnes contained chapters devoted to these gearboxes but lacked the details needed for a "new chum" to disassemble, identify and do any necessary repair and reassemble the ENV 75 successfully. Handbooks of vehicles fitted with the gearboxes were limited to advice on driving with it and a potted explanation of how it worked.

Working on it on my own and at that time not knowing anyone who had any experience with these gearboxes, I eventually got the unit disassembled. Removing the gear selector arms and the main drive train is a straightforward job. Taking the bottom plate which holds the band assemblies away from the case proper was a little more difficult until I realised that the main spring had to be compressed with a long bolt, to enable its operating arm to clear the case.

Once apart it became clear that the gearbox had endured as hard, or harder, life as the rest of the car's mechanical components. Given the fact that it had spent that entire life struggling with the load of a heavy four door saloon body, some wear was expected. It had obviously been apart more than once before. There were indications that the previous repairs had been carried out by a person or persons as unfamiliar with the gearbox and its workings as I was myself.

All the main drive train bearings required replacement; all of the bronze bushings and distance washers, located on and between the epicyclic gear train, showed wear and also required replacement. There was obvious wear on the input shaft which was corrected by hard chroming, and grinding back to size. This was done in the area of the third speed drum and the spigot which indexes with the output shaft via a bronze bush. This bush was also replaced.

At this initial rebuild, it appeared to my uninitiated and untrained eye that the friction linings of the gear bands and the cone clutch were suitable for further service, having been replaced during the life of the box. (*Old saying – Those the gods are about to destroy, they first drive mad*)

An interesting item was the camshaft, or selector shaft which is used to select the required gear. This shaft has a

series of discs along its length, with one devoted to each gear. There is an aperture in each of these discs into which a specially shaped spring drops to select the gear required, as the shaft is rotated. This shaft had been broken and had been 'repaired' by riveting the broken sections together in a piece of copper tube. Selection with this shaft had obviously been an issue, as extra pieces had also been soft soldered into the disc apertures.

To create a replacement, a new brass shaft was turned up, together with separate new phosphor bronze discs. Each of these discs had the required aperture hand cut to fit the individual spring and attached to the shaft in the correct position, which was found by fitting the shaft to its sector arm which uses a ball and spring locator to find each gear's position. Each disc was drilled in situ and fixed with a taper pin. Some careful modification of the apertures was required in the first and reverse discs, as these had to also select both springs in the neutral position.

To achieve neutral these gearboxes select two gears at once, which are not allowed to close their bands at the same time, being blocked by a 'one pass only' mechanism, so causing all bands to be held away from the drums enabling free rotation. Once all of the discs were correct, they were silver soldered to the shaft.

It was noted that there was some wear in the straight cut gears in the intermediate epicyclic drums, but not enough to warrant immediate replacement. After carefully washing each of them out, their roller bearings also appeared to be serviceable. Having no spares, or access to any source of parts at that time, I had to make do with what I could do myself. The bushes and distance washers in and between the gear drums were made to what appeared to be correct, allowing about 0.010" clearance between the drums when assembled.

Any pins holding the gear bands and their centring mechanism that showed wear were replaced with new pieces made of bright steel stock.

Eventually the gearbox was put back together and proved to again work correctly at selecting and driving in each gear. Adjustment of the gear bands was done on a "by feel" basis, by closing up each band until it would hold the drum solidly when selected, and drive without slipping, but giving regard to achieving maximum "toggle" of the operating arms as detailed in the then available printed matter. The automatic adjustment of each band was also set up as per this information, but it was noted that after this procedure, the automatic adjustment of all the gear bands was sluggish at best. This was put down to the age and wear of the adjuster springs, which are designed to turn and tighten a nut on the operating rod on each of the bands as the friction material wears. It was not considered necessary at the time to have this working properly as only low mileages would be covered, and these springs are accessible to change, if they became available at a later date, with the gearbox installed in the car.

Actually getting this car going from the pile of rusty parts that I started with really did leave me feeling rather chuffed. It had been a very long job, given that my time to work on it was limited, and I did not have a lot of contact with other restorers. I had always been a 'fiddler' with anything mechanical, and had rebuilt a number of engines, gearboxes, etc. but this was my first complete rebuild of a vehicle.

Even if it is not the best car in the world (and certainly not the best Alvis), the Firefly with its rebuilt Martin and King body looks quite nice, for a smaller Alvis. Although it was not completed down to its last detail, it was decided to use the car to convey my eldest daughter to her wedding.

This big day came and with home during a bride's preparation for the ceremony being no place for blokes, a friend and I took the car for a drive to anywhere to keep out of the way. Returning home at an appointed safe time, we approached the fairly steep hill leading up to the house at a slow speed. Engaging low gear at the base of the hill resulted in a complete absence of forward motion.

"This is no problem, it will just need a little adjustment of the band and it will be right again."

Alas, it was not to be. No amount of tightening the band would induce it to engage with its drum again. It became clear that the bands' friction material had worn down to the point that it could no longer close tightly enough. On this, of all days! Without low gear, the car could not be used for the wedding, as the approach to the church was also a quite steep hill.

The wedding went ahead, using alternate cars, but the bride's Father spent the rest of the day a shattered heap.

With the passing of time, I eventually recovered.

The gearbox was removed from the car and disassembled again. All the brake bands and the top gear cone, which is actually contained in third gear drum, were sent to a specialist brake service workshop for the friction material to be replaced. I was unaware at the time that the material bonded to the cone was in fact too thin to last any time, but having no specification I proceeded to rebuild the unit with this. The cone required the material to be machined to fit which I could see later, exacerbated the problem further.

At this time I also revisited the band centring and stabilising mechanism, as I now suspected that movement in this could allow bands not in use to contact their drums and cause heating. I had noticed that there was some looseness in the aluminium blocks which hold small springs bearing on extension 'keels' at the bottom of each band to hold them clear of the drum when not engaged. There was play in both the pins holding the blocks to the base of the gearbox case and with the fit of the springs in the blocks.

Working in the electricity supply industry, I had access to offcuts of the aluminium material used for 'palms' which are used for high voltage connections. This material is designed primarily for good electrical conductivity, but is also highly resistant to environmental deterioration and is a relatively hard aluminium alloy. While the bands were away for relining, I remade all of the blocks by hand from this material. I also had new springs made which fitted snugly in the holes in the new blocks.

The gearbox was reassembled with its new friction linings and I believed that this would now be suitable for a long period of service. Test driving on the road appeared to confirm this.

The day came when my son was also to be married. He married a girl from Noosa Heads, on the Sunshine Coast, North of Brisbane where the ceremony was to take place. The Alvis was again called on to be used for the wedding.

The family decided to spend a few days on the Coast either side of the wedding. With my son-in-law as

passenger we set off to drive the Alvis the approximate 100km to Noosa. We started early in the morning to avoid heavy traffic, and travelled via secondary roads to avoid the fast moving Bruce Highway. This may or may not have been a good decision. The chosen route contained many roundabouts which required a change down to third gear to negotiate. A little over half way to our destination, coming out of a roundabout, I found top gear would no longer engage.

I pulled off the road to investigate the reason for the problem and found that the actuating hook, which pulled the top gear cone into engagement via a radial ball in groove mechanism had disconnected from its associated hook on the cone carrier. Attempting to reengage this hook just resulted in it coming out again at the next attempt to select top gear. During one of these stops we were visited by a passing Alvis owner, Dale Hanley, who had spotted us from the road and arrived armed with a camera. Normally I am happy to meet another owner, but it is a little embarrassing if it is at a time that my own car is less than at its best.

Eventually, unable to complete a reliable repair, we went on using third gear.

Although speed limited, this time the car performed well at its intended wedding duties.

With the car home, the gearbox was removed yet again. On investigation, I found that the cone lining needed to be thicker to move the male part of the clutch out further, and so bring the engaging hook around to a position that it would remain in engagement reliably.

I removed the drum with the cone lining and approached the brake people to reline it again, this time with thicker material. They declined to take the job advising that they could no longer do relining of cone clutches of any sort.

I could now consult the good Doctor Google, and searching on 'cone clutches Brisbane', I found an Engineering Works which did the relining of cone clutch brakes on cranes. Conveniently, it was within walking distance of my work. I took the drum to them and they agreed to reline it with a fairly soft friction material, but would not guarantee how it would work in oil. I decided that having no obvious alternative at the time, I would take this chance.

With the new material bonded in place, the drum was set up and machined to accept the mating cone. Unfortunately my reasoning that the material should not project more than a minimal amount from the drum, and then have the mating face also machined to a full contact with the cone, would again drastically reduce the working life of the clutch.

In the year or so following this work, the car was not used very much. Its only notable outings were for use at the wedding of the son of a friend who had been impressed with it at my own son's nuptials at Noosa, and for the wedding of the daughter of a workmate of my wife. People must really like these vehicles for weddings, as while stopped in the street in Strathpine to put the ribbons on for the latter, we were approached by a girl who pleaded with us to also do hers. My wife did waver, but I had to gently explain that I was not licenced to use it for the public. Of course it behaved impeccably on both of these occasions, with no perceptible slip in any gear.

Although not a lot of miles were covered, eventually top gear slip again became evident. Out it came once

again. This is when I deduced that not only had I machined too much friction material away, but had not provided enough clearance for the small end of the cone, and this was 'bottoming'. I sheepishly returned with the drum to the crane bloke, to have it relined once again.

This time I felt that I had finally got the top gear cone right, with ample material allowed for a good long life and bottom clearance for the cone as the friction material wore. The one thing that I did notice this time was that the star shaped 'kick out' spring located in the end of the cone was a little loose in its groove.

"Of course this was not a problem; it only compressed when the top gear cone was engaged and returned to the groove when it released. It could never possibly come out!"

In those dim dark days long past when I worked for a living, often when we were busy, I worked on Saturdays at our Virginia office. These were occasions when I took the opportunity to drive the Alvis to work. My insurance did not cover it for normal work day driving, but use on Saturdays would be fine.

Leaving early one morning I drove from my home in Albany Creek via Keong Rd to Albany Creek Rd. At a change from top gear to third in Keong Rd, the pedal felt a little strange. I then found that I could not stop the car. Fortunately the lights at Albany Creek Rd were with me. I had to use the ignition switch to stop at the next lights, and the starter to get going again. I did two laps of the Albany Creek Cemetery in an attempt to return home, but increasing traffic flow made the right turn too dangerous, as there were no lights at Bronson St at that time. I had to pull over and call a tow truck. This was the ultimate humiliation, especially when the driver asked "Why do you guys want to drive this old s**t anyway?"

Of course the star spring had come out of its groove and hooked both parts of the cone together.

Removing the gearbox once again, I hand made a new spring with its six leaves a little longer from available spring material which was slightly heavier. I then set up the male cone section in the lathe and cut the spring groove a little deeper. Back together all seemed to be right, at last.

There followed a period of years when the car was not used at all but left up on blocks, however I believed that when I could use it again, at least I had finally got that gearbox fixed. Nothing more would be needed to be done until forced by wear of the friction material, as it was now going well in all gears.

With the passing of time, some changes in life occurred, which included my retirement, so I could now think about using the Alvis again. My younger daughter also announced that she was to be married and I was fairly forcibly advised that as her Sister-in-law had the car for her wedding, she should have it as well.

As it had not been driven for some years, there was a flurry of activity to get it on the road again, but thankfully no work required on the gearbox. Again the car behaved perfectly on her big day.

With this wedding over and as my intention was now to use the Alvis more in the future, I did some work on the engine, which included head modifications for unleaded fuel and new pistons which increased compression. It was now going better than ever, so I felt that now it was ready for an extended trip.

This opportunity came with the 2015 'Alvis in the

Valley' National Rally in South Australia's Barossa Valley. This fitted in well with my desire to see a number of things, places and people on the way. I registered to attend, planning to drive the car to and from the event.

Just to make sure that all was in order to make the trip, two weeks before I was due to leave, a friend and I took the car for what was intended to be a day run.

We drove out through Dayboro and took the rather steep and winding (good Alvis motoring) road over Mt Mee to meet the D'agular Highway near Woodford. Approaching this intersection, I noticed that top gear had begun to slip. Why? There is ample material and it is selecting and engaging properly, so why is it slipping again? As heat was generated it began to also slip in the intermediate gears.

With the gear slip getting worse all the time, it was all that I could do to get my friend and the car home.

The next day I tried readjusting the bands and also slightly increased the tension on the main spring. This improved the intermediate gears, but slipping in top gear on acceleration was still evident.

Humiliation all over again! I had to contact the organisers of the SA Rally to advise that I would be unable to attend with the Alvis. It was too late to pull out so my only option was to go by modern car. I guess that this was better than getting half way there and having the problem.

I did attend the very well run and enjoyable Barossa Rally by modern and also did my side visits on the way there and back.

I proceeded to investigate the gearbox failure soon after getting home. This time I was able to take a more measured approach to its repair. One result of my attending the SA Rally was that I was convinced by other Queensland attendees to join the Vintage Car Club of Queensland (VCCQ). Members of this organisation put me in touch with Riley aficionado Alan Hill, who directed me to the website of PBM Engineering in Germany (I had heard of this before but had not been able to find it). The owner, Peter Meyer, has made a study of many types of Pre Selector gearboxes and has written workshop manuals for them. At the time of writing his manual on the ENV 75 is being written, so I will be lining up for one when it becomes available. He has been able to supply a new cone lining (for later use) and a set of adjuster springs, plus a wealth of information on useful tools and information which has been very helpful in getting it together properly.

The reason for it beginning to slip after the Mt Mee road run was found to be my home-made star spring. This had compressed in a vice OK before the box was assembled, but in service it was found to bind. I did not appreciate that the spring pressure which engages the top gear cone is not enough to properly compress this slightly heavier spring. A minimal amount of wear on the

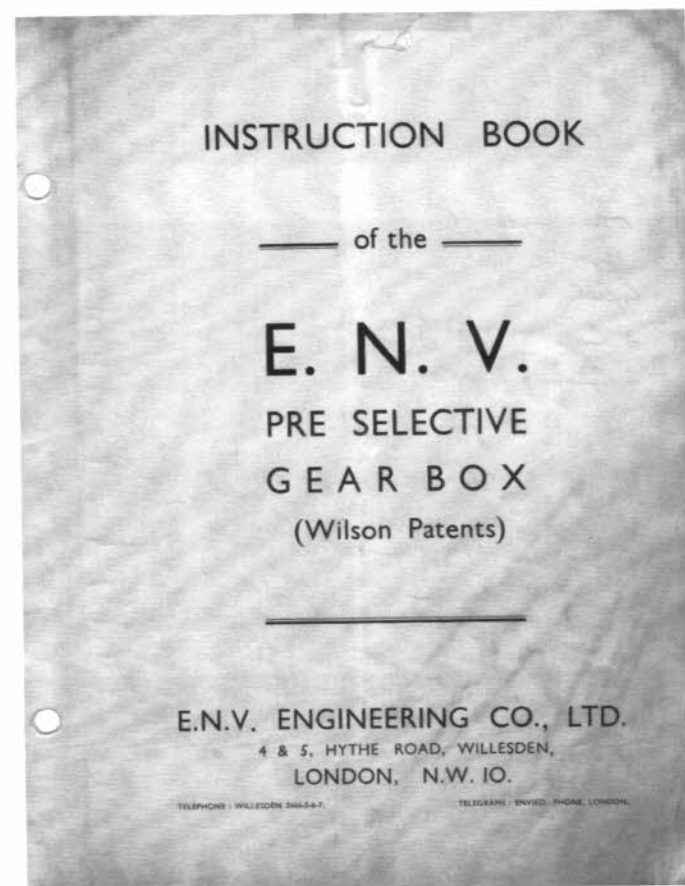
cone friction material resulted in this spring bearing on its distance piece and just spinning, with no pressure on the cone itself.

I have now remade this spring in lighter material. I have also had the main spring tested for pressure at measured lengths as per Peter's specification. I have remade the items damaged by the gears slipping. These are the third gear drum bush, the distance washer between the second and third drum and the star spring distance piece, which was made to Peter's instruction.

I have now reassembled the gearbox once again, this time with the benefit of others experience as well as my own. I have better information on the gearbox adjustments and these have been carried out. It has been put back in the car and so far is behaving well on the road.

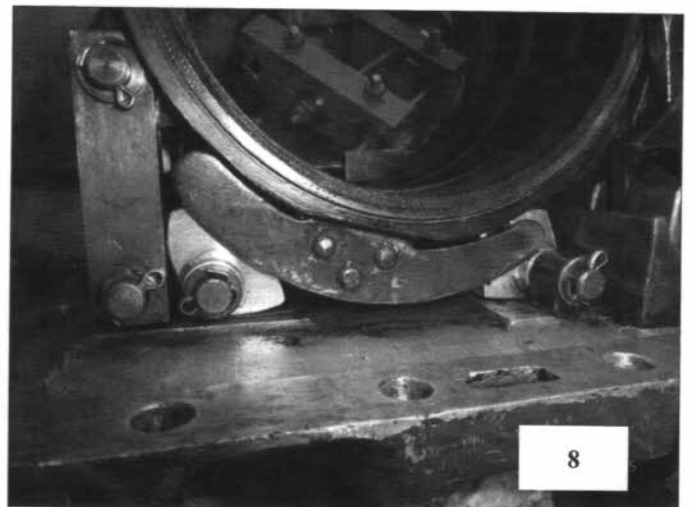
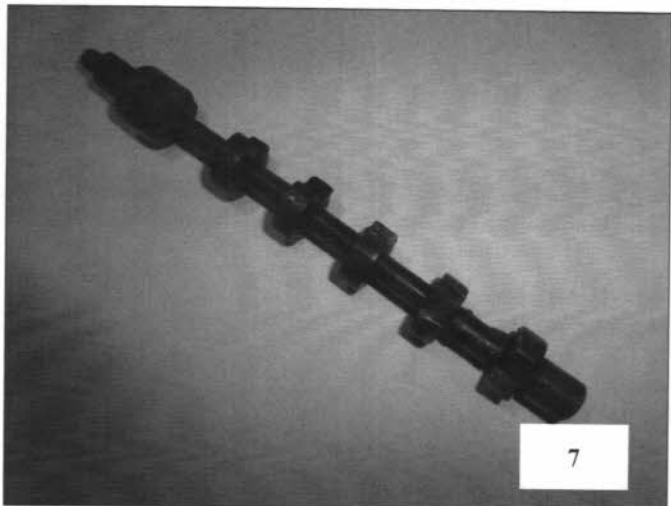
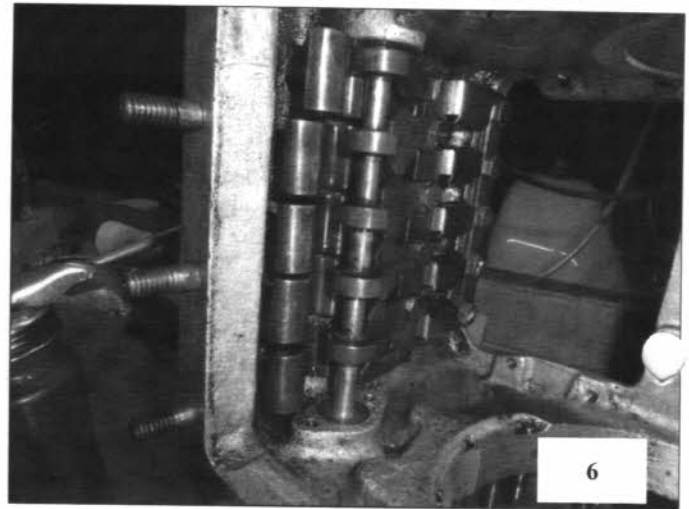
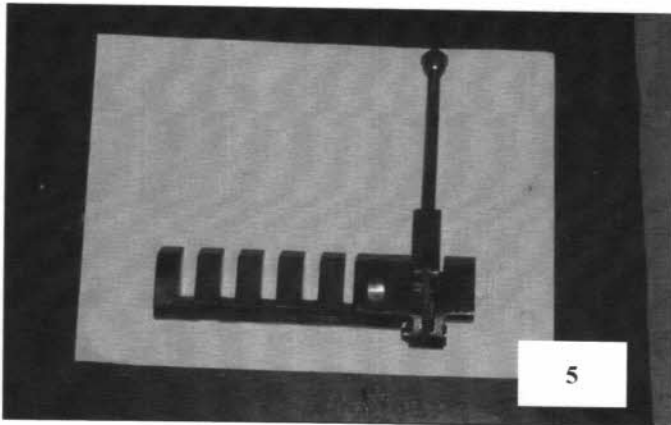
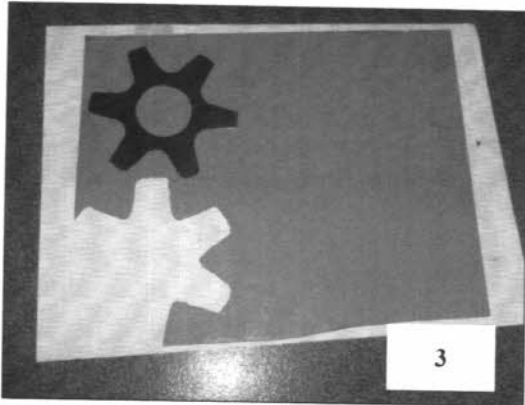
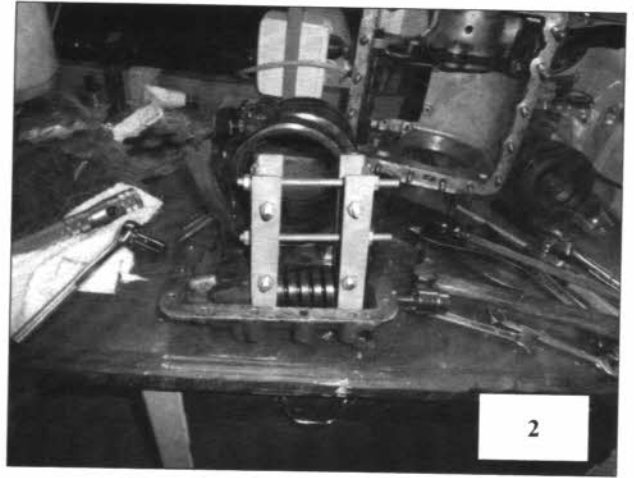
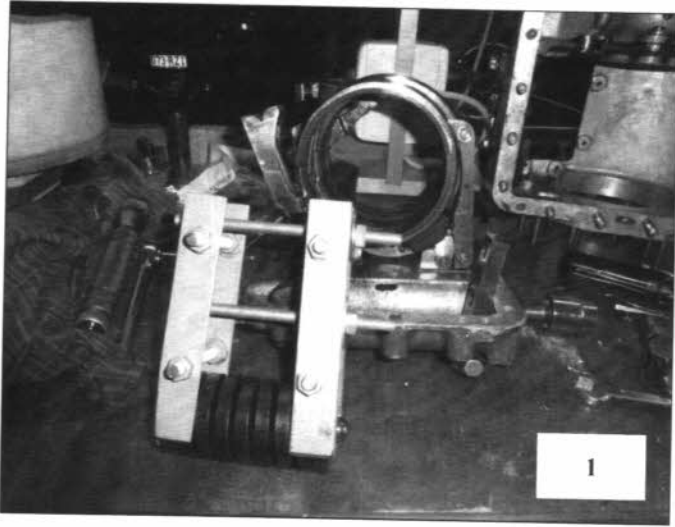
So - This time it will be perfect, and will not give any more trouble for many years!!
Won't it??

I am indebted to Simon Fishers book 'The Alvis Firefly 12' (©2007) and Peter Meyer of PBM Engineering - website www.preselector-gearbox.de for information in this article.



Photos -

- 1 & 2 Removing the Main Spring using Special Tool (Design from Peter Meyer)
- 3 Star Spring hand cut from stock (Laser Cutters were not interested in a one off)
- 4 Star Spring fitted to the 4th gear cone
- 5 Busbar which transfers the Main Spring pressure to the gear bands and cone
- 6 The New Camshaft or Selector Shaft installed (Reverse selected)
- 7 The Old Camshaft - note 'repairs'
- 8 The Band Stabilizer with aluminium spring blocks





AAA

AAA (A) Run, Sunday 4th October.

Alvis was invited again this year and Melbourne turned on a spectacular day weather wise so after some careful consideration, as we actually had a choice, we decided to give the McKinnon's MGA another outing. The little red car revelled in the sunshine – it was a perfect day for open car travelling.

Travelling in convoy with local friends and motoring enthusiasts Ernest and Julia Litera in their smart MGA to the start at the Time Ball in Williamstown.

Collecting participants at the Time Ball carpark there were 10 MGA's, 6 A Model Fords, 1 Armstrong Siddeley, 1 Austin 7 and 2 Alvii. Alan and Noeline McKinnon's, fabulously polished 12/50 and Chris Higgins in his pretty 12/50. attended the event and I have to take my hat off to Chris who travelled around the bay from Rosebud (~100km) and was continuing around the bay to Queenscliff and then taking the ferry to get home.

The route took us approximately 35km (and about 40 speed humps) along the coastal area west of Melbourne to Weribee Mansion where we parked on the grassy car park and enjoyed a picnic lunch under the trees.

A number of people visited the rose gardens, not quite in full bloom or toured the Mansion before leaving for home.

It was a very pleasant day out and it was good to meet up with enthusiasts with different interests.

Dale and Maritta Parsell

6



ALVIS PEOPLE BEHAVING BADLY



Andrew McDougall & Tony Hannam about to cross the raging rapids of the Murray River

FOR SALE

TIES

\$25
EACH



MUGS

\$7.50
EACH

RING THE TREASURER, MARG LANG FOR DETAILS

Steam Locomotion 2015



All members of the Alvis Car Club - Victoria, Armstrong Siddeley Car Club, Bristol Owners Club of Australia, and the Daimler & Lanchester Car Club of Victoria, are invited to join the members of the Jowett Car Club of Australia for a Steam Locomotion experience combined with lunch in historic Malden. We have organised a steam train trip from Castlemaine to Malden and back using a First Class Carriage with bar where the Stewards serve drinks to our seats.

- Date:** Sunday 8th November 2015
- Start Location:** Victorian Goldfields Railway, Platform 3, Kennedy Street, Castlemaine.
- Start Time:** Board our carriage at 11:30 am sharp
- Car Parking:** There is a suitable area for parking our cars adjacent to the Castlemaine station which will be watched from the station platform. The Victorian Goldfields Railway has had large groups of vintage cars park there without any problems in the past.
- Lunch Venue:** Kangaroo Hotel, 89 High St, Malden.
There is a short 10 minute walk from the Malden Station to the Hotel, although the Railway has a courtesy bus (10 seat capacity) available for any of us with mobility issues.
- Finish Location:** Back at Castlemaine Station at 3:15 pm
- Costs:** Steam Train: Adult reduced to \$40.00 (Normally \$65.00)
Conc'n (Seniors Card) now \$35.00 (Normally \$60.00)
Children (aged 4 to 15) now \$20.00 (Normally \$35.00)
- Train tickets are to be purchased on the day individually at the ticket office; make sure you mention the car club to obtain these excellent group discount prices. Drinks at bar prices; pay the steward.
- Lunch:** \$27.00 for a 2-course menu with a choice of 2 options for both main & dessert (alternate drop) with tea or coffee.
Children \$15.00
- Payment required on the day at the bar prior to serving.
- Bookings:** Please contact your car club representative by 25th October 2015

Each car club should make their own arrangements so that you all arrive at the Castlemaine station in time to park then purchase your train tickets and board our carriage by 11:30 am.

JCCA Founded in Victoria in 1957 Associations Incorporation Registered No. A9664E

WANTED

Wanted, ALUMINIUM CLUTCH CONE. Suitable for relining and any other cone clutch parts.

Gary Guiver. 0362396467. bandicoothollow@gmail.com

FOR SALE

ALVIS SB series 12/70 DHC

Car 19106

Chassis 15305

Engine 15790

Has its original Mulliner coachwork and requires painting, new upholstery and new hood for completion.

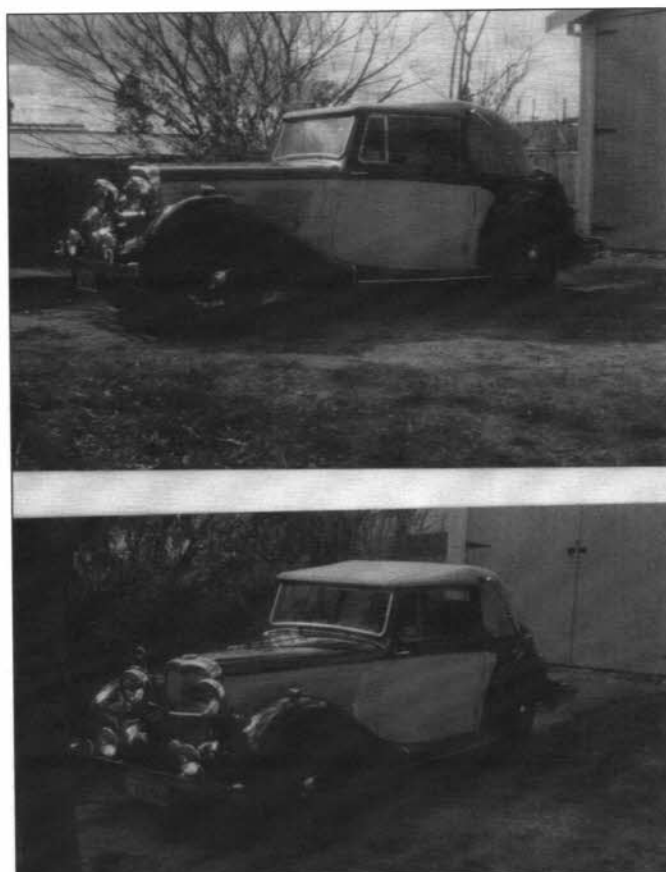
The engine has been thoroughly overhauled.

Asking price \$24,000 ono

Bruce Cunningham

Email: bcunningham55@hotmail.com

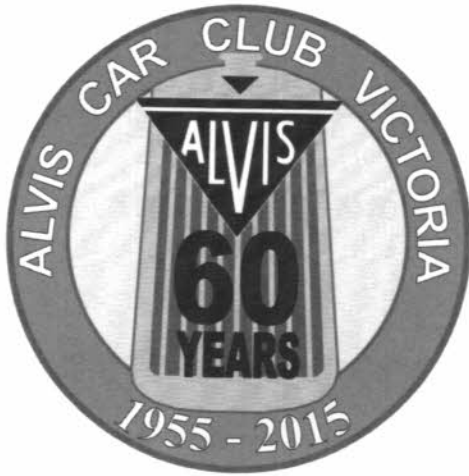
Mob: 0431 184 719



FOR SALE

1932 TJ12/50 Doctor's Coupe. Engine 3884 chassis 9367 body 14223. Engine & body rebuilt 1997-8. Runs well. Last 12/50 to come to Australia through an agent. \$45,000 or best offer.

CHRIS HIGGINS
(03) 5986 1510



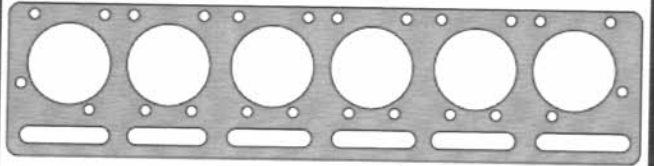
A Special grill badge has been struck to commemorate the 60th Anniversary of the ACCV. Yellow and green were chosen as the predominant colours, as the original Club badge carried those colours.

\$30
each

Available at general meetings or plus postage - contact the Treasurer, details page 2

FOR SALE

ALVIS 3 ½ Litre Engine COPPER CYLINDER HEAD GASKETS



- CNC cut from grade 122 solid copper ensuring perfect accuracy.
- Vacuum annealed.
- Superior thermal conductivity compared to conventional composite gaskets, stabilising temperatures across the head and block.
- Reusable.

\$168.00 + postage

Contact Peter Miller
Email - moulen@tpg.com.au



FOR SALE

1954 Grey Lady chassis 25605

Car restored some years ago.

Last registered 2012. wire wheels, full leather trim, good headlining and wood. I have not driven the car for any distance however seems good mechanically. Car located in Sydney. Asking \$16,000

Contact: Phil Dadd 0418 646 149 or email: pdadd@bigpond.net.au

FOR SALE

1938 Alvis Silver Crest saloon
Chassis 14196

Fully restored by Gharre Dalliston.
Many spares may be included. Located on the Sunshine Coast.

Contact: Maureen Cash

Tel: 07 5456 2430

email: maureencash@dodo.com.au





FOR SALE

SG Silver Eagle Sports Tourer
 12,000 miles since complete restoration
 including new body & full weather equipment &
 tonneau. Chassis No. 12684 Original books &
 full history available
 Restoration details available on request.
 \$95,000 O.N.O.
 Murray Fitch Telephone: 03 5766 2529

FOR SALE

1947 TA14 Special
 Chassis 22158
 Engine V540607P
 Spares included
 Documentation of early history as a
 sedan included.
 Asking price \$20,000
 Contact Rob Simpson
 Phone: 02 4997 8298
 email: meta1447@yahoo.com.au



FOR SALE

Alvis 12/50 TJ chassis 9145
 Very reliable, excellent condition
 Low boost supercharger
 Enormous torque, great
 performance on the road.
 Full road equipment

\$65,000 negotiable.

Contact Rob Rowe
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