



BARTREAD



NEWSLETTER OF THE WARTIME VEHICLE
CONSERVATION GROUP, South Australia .

EDITORIAL



Greetings, and welcome to issue 18 of your club magazine, BARTREAD. This edition is your new editor's largest so far, and contains something for everyone, please enjoy the read. The WVCG annual general meeting has come and gone, and all committee positions were filled, so a big thank you must go out to everyone who put their hand up. Christmas won't be far away, and your club is planning a special event to celebrate. See the article in this edition, which gives all the details. The nice weather is finally upon us and just perfect for a drive !

ISSUE 18, NOVEMBER 2015

IN THIS ISSUE



A SPECIAL REPORT ON A CLUB
MEMBER'S VISIT TO THE USS
ARIZONA MEMORIAL IN HAWAII



A FEATURE ON THE VENERABLE
AUSTIN CHAMP, INCLUDING A
MEMBER'S EXPERIENCE RESTORING
AN EXAMPLE

ALSO FEATRUED



THE WVCG CHRISTMAS EVENT ...
SEE FEATURED ARTICLE FOR ALL THE
DETAILS.



ITEMS FOR SALE, FIND THAT SPECIAL
HARD TO GET PART, OR JUST
DISCOVER A REAL BARGAIN !
PLEASE EMAIL DETAILS OF ITEMS
FOR SALE TO THE NEWSLETTER
EDITOR, INCLUDING PHOTOGRAPHS

"No newsletter editor is at all hours wise ,
perhaps just when being contradicted "

THE WVCG ANNUAL GENERAL MEETING

The WVCG Annual General Meeting was held at the Tower Hotel on Tuesday, 1st September, 2015, at 2000 Hrs. Mr. Tony Cole was nominated and elected to the position of Returning officer. The following committee positions were declared open and the results of the nominations and subsequent elections are as follows:

PRESIDENT : Adrian Nieckarz ; **VICE PRESIDENT** : Aaron Fell ; **SECRETARY** : Rick Shearman ;
TREASURER / WEBSITE OFFICER : Mick Jenner ; **NEWSLETTER EDITOR** : Adrian Nieckarz ; **HISTORIC REGISTRAR / LOG BOOK OFFICER** : Mick Jenner ; **VEHICLE INSPECTORS** : Aaron fell and Rick Shearman ;
FEDERATION DELEGATE : Aaron Fell ; **PUBLIC OFFICER** : Mick Jenner . (All members elected unopposed)

LEOPARD AS1 MAIN BATTLE TANK

During a number of recent trips around South Australia, your Editor, with his usual keen eye for detail, had noticed a number of Leopard tanks popping up in unexpected locations. One was spotted in Two Wells, another at the Proof Range near Port Wakefield, and a third in Mount Gambier. This necessitated further investigation ! As it was soon discovered, these decommissioned Leopards were gifted to RSL clubs across the country, following applications that were submitted in 2007. In total, 24 RSL clubs across Australia have received one, as acknowledgement of the vital role these clubs play in connecting local communities with our military history. The Leopard was the mainstay of Australia's armoured capabilities for three decades.

The Leopard AS1 main battle tank replaced the Centurion tank in the mid 1970's. These vehicles were manufactured by Krauss Maffei, in the Federal Republic of Germany. They remained in service for 31 years, although they never actually saw any operational service. They were replaced by the Abrams M1A2, in 2007.

TECHNICAL DATA :

CREW	4, COMPRISING COMMANDER, GUNNER LOADER/OPERATOR, AND DRIVER
WEIGHT (COMBAT LADEN)	42 400 KG
LENGTH	9.54 METRES WITH GUN FORWARD
WIDTH	3.37 METRES , WITH A HEIGHT OF 2.62 METRES
MAIN ARMAMENT	105 MM L7A3 QF GUN
AMMUNITION	59 ROUNDS (17 IN TURRET AND 42 IN HULL)
MACHINE GUNS	7.62 MGA2 CO-AXIAL, AND 7.62 MG3 EXTERNALLY ON CUPOLA
SMOKE DISCHARGERS	FOUR 76MM ON EACH SIDE OF TURRET
ENGINE	DAIMLER BENZ MB838 V10 CYLINDER DIESEL. 610 KW (830 HP)
GEARBOX	ZF 4 HP 250, WITH FOUR FORWARD SPEEDS AND TWO REVERSE
FUEL CAPACITY	950 LITRES, GIVING A RANGE OF 500 KM
MAXIMUM SPEED	62 KM/H





THE FV1801 AUSTIN CHAMP

Yes gentleman, sooner or later, it was always going to happen ! An article would appear in you club's newsletter, featuring the venerable Austin Champ. While these vehicles are not exactly everyone's cup of tea, they do indeed represent an interesting chapter in post WW2 British military vehicle history.

In the late 1940's, the British Army specified that a light field vehicle be developed, one that would be capable of performing in all theatres of operation, and one that would rival the US produced Jeep, a vehicle that had performed so brilliantly throughout WW2. The British Military called for a light utility vehicle that could not only traverse unprepared roads, but one that would have the ability to perform underwater (ford rivers and the like) and have the ability to be air portable as well. Above all else, the vehicle must be British !!

So it was, in 1947, the project to design a "Car 4X4, 5 CWT, FV 1800 Series" was born. Coincidentally, at about this time, the Land Rover was making its debut, but the Army of the day was much more interested in the development of its own, purpose built vehicle. At the commencement of this daring venture, three hand built prototype vehicles were initially produced by Nuffield Mechanizations (Morris), and these were known as the "Nuffield Guty". This vehicle featured the already familiar Jeep tub style body and a horizontally opposed, water cooled, four cylinder engine, of 1880 cc capacity. Of the three vehicles produced, all of which were different, only one remains today. During the testing of these vehicles, serious shortcomings were identified.



The Nuffield Mechanizations (Morris) Guty

The design of the Guty was revised by the Fighting Vehicles Research and Development Establishment (a ministry of defense department), and went on to become the "Wolseley Mudlark". The Mudlark was also produced by the Nuffield Group, who went on to become part of BMC. A total of 12 examples were produced in 1948, and these were sent for testing in the UK and overseas.



The Wolseley Mudlark. This vehicle bears some resemblance to the production Champ, apart from the more bulbous front mudguards.

The Wolseley Mudlark was of a more advanced design, with fully independent suspension and a four cylinder Rolls Royce B-Series engine (B 40). One such vehicle was loaned to the US Armed Forces for independent testing and comparison to the MB and M38 Jeeps used at the time. According to an official US Army report written, the vehicle was considered to have been well built (Great diplomacy !), however, it suffered from cooling system, transmission, and differential problems that all needed to be rectified prior to its actual use in military service. Only three of these vehicles are known to survive today.

Following further refinement, the final design was formalized as the FV 1801(A), and the contract to produce 15,000 vehicles was awarded to the Austin Motor Company, in Birmingham.

THE FV1801 AUSTIN CHAMP continued

The first production vehicle was completed in September, 1951. The Austin "Champ" was actually never officially so named, but was given the title "Truck, ¼ Ton, 4x4, CT, Austin Mk.1". The "CT" classification represented a then new class of British military vehicle (CT = **CombaT**) which were planned by the Fighting Vehicles Research and Development Establishment. The basic military version of this vehicle was known as the WN1 by Austin. Approximately half of the contract was for basic trucks, known as cargo vehicles, and the other half was for special "Fitted for Wireless" (FFW), which had high output generators and extra batteries fitted in order to power radio equipment. The early production vehicles were fitted with Rolls Royce built engines, but later ones were fitted with a virtually identical engine, built under license by Austin themselves.



The body was a utilitarian open four-seater tub made up of welded pressed steel panels, similar in style to the war time Jeep. However, unlike the Jeep, the Champ did not have a separate chassis, and the body was designed to carry part of the vehicle stresses. A simple hood, made from a PVC coated cloth (not canvas) was provided, and a set of weather screens with hinged doors on a simple frame were available to render the vehicle somewhat weather proof. The inner windscreen had the ability

to open outwards for ventilation, or the whole frame and glass assembly could be folded down onto the bonnet. Pioneer tools were carried (spade and pickaxe) on the sides of the vehicle, and a 20 litre jerry can (for the carriage of water, not fuel) was also fitted to the rear , along with the spare tyre.

The engine was a four cylinder in line petrol unit of 2838 cc capacity (173 cubic inch) It was designed with absolute reliability as a prime criterion, with fuel economy a secondary consideration. As a consequence, the vehicle's 20 gallon (91 litre) fuel tank only gave an operational range of approximately 300 miles on road. Fuel economy off road was terrible ! The early Rolls Royce engines had an aluminum cylinder head, the later Austin versions a cast iron one. This engine has overhead inlet valves, side valve exhaust. All electrical items are contained within sealed housings, rendering the engine assembly waterproof .



The engine was coupled to a five speed all synchromesh gearbox, with no reverse gear. A conventional Borg and Beck single plate clutch was used, and drive was transmitted from the gear box via a prop shaft to the rear combined transfer box and differential assembly, which also incorporated reverse gear. Reverse gear was selected via a forward-reverse lever, giving the vehicle five forward and five reverse gears. Drive to the front wheels was provided by another prop shaft, which runs from the rear differential to the front, with four wheel drive being engaged by a simple dog clutch. The use of a conventional separate transfer case (with high and low range) was not possible, due to the layout of the vehicle's cruciform chassis.

THE FV1801 AUSTIN CHAMP continued

The vehicle had an innovative suspension system that was based on longitudinal torsion bars for primary springing, and featured fully independent suspension on all four wheels using double wishbones. Each wheel station was also fitted with a rubber cone and cup system to buffer extreme upward suspension travel with energy control exercised by double acting telescopic shock absorbers. This system gave an exceptional cross-country performance. Front and rear axles were constructed into a cradle sub-assembly, which could be rapidly exchanged in the field.

The engine, fuel system, electrical system, and differentials were waterproofed, so the vehicle could wade to a depth of 2 metres with minimal preparation. A snorkel, attached to a large oil bath air cleaner, could be raised during wading operations. (The snorkel would normally be carried horizontally on the right front mudguard. In order for it to be raised, it had to un-bolted and re-bolted in the upright position) It was found that maintaining this level of capability was expensive and of limited value. Army mechanics disliked these vehicles because they proved to be difficult and complex to work on.



The wading trough can be filled to a depth of four feet, is mainly used by prototype military vehicles.



The Austin Champ was produced in three distinct models : The WN1, military version ; The WN2, military version, fitted with an Austin A90 engine ; The WN3, civilian version, which could be specified with the Rolls Royce or Austin A90 engine. Only around 500 civilian Champs were ever built, these featured a simplified body, simpler instrument panel, and a 12 volt electrical system. (All military Champs were 24 volt)

The civilian WN3 was adapted as a small fire engine by Fire Armour Ltd of London for use in commercial premises and for locations where large vehicle access was difficult. This version was known as the Firefly, and carried a sixty gallon water tank, PTO driven pump and ladders. Only one example is known to still exist today.

The WN2 was conceived in case there was ever a problem with supply of the B40 Rolls Royce engine. Fitted with a modified Austin A90 engine, this is the rarest of all Champs, with only approximately 13 ever having been built. Only one is known to survive.

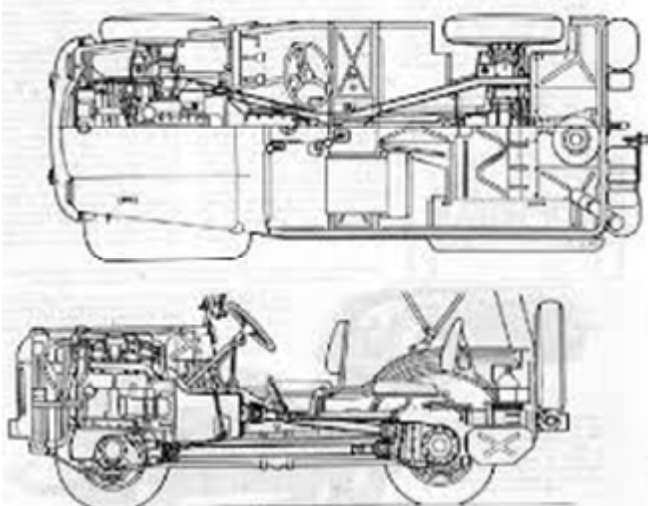


THE FV1801 AUSTIN CHAMP Continued

As the Champ entered military service, it became apparent that although it had outstanding cross – country performance, it was too expensive to produce, too complex to maintain, and had limited use outside the narrow field combat role for which it had originally been designed. As a consequence, the original contract for 15,000 vehicles was prematurely terminated, at around 11,000.

The Land Rover, which actually entered British Army service before the Champ, was half the price, simpler to maintain, and could perform 80% of the tasks for which the Champ was designed. So it came to be that the Champ had a relatively short service life with the regular army, before being redeployed to the Territorial Army. In the mid 1960's, a decision was made to withdraw the vehicle from service completely, and by 1968, most Champs had been sold off. The mass sales made them a cheap vehicle to purchase, the average price for one in 1966 was 150 British Pounds.

The Austin Champ served with the British Army not only in the UK, but in Africa, Germany, Cyprus, Libya, and the Suez Campaign. Early vehicles were sent for troop trials at the end of the Korean War. In addition, the Australian Army had 400, which it purchased new, and a similar number which were ex-British Army ones.



Armoured version fitted with Vickers machine gun.



The Champ during Air drop trials. This proved unsuccessful, with the Champ being too heavy (around twice as heavy as the WW2 Jeep)



RESTORING AN AUSTIN CHAMP

The restoration of an Austin Champ represents an interesting challenge, but what military vehicle doesn't ? It would be fair to say that whilst this vehicle does not enjoy the popularity of the Jeep, it does offer something different and rewarding in terms of a completed restoration. Your editor became interested in these strange little vehicles as a young lad, riding around in the back of one, which was at the time, being used as a vineyard tractor in the Clare Valley. Quite a number of years passed, and the urge to "restore something" set in, following a number of years working in a family crash repair business. After many years in the Army Reserve, the idea of a military vehicle became appealing, and so a complete, running (and very rough) vehicle was finally purchased from an advertisement in a Saturday Advertiser.

So began the military vehicle affliction ! Your editor had no idea at the time where this adventure would lead, and when it might end. Well, it hasn't ended yet, and shows no signs of waning ! Some two years after the purchase of the first Champ, a second one was acquired, which had been disassembled, and this became the project vehicle. It had a reasonably straight and rust free body, as well as a completely re-built engine. Some five years later, (following much sweat, a great deal of thought, and a vastly depleted bank balance) a fully restored vehicle emerged from the editor's shed, and it hasn't missed a beat since !

If anyone is considering restoring a Champ, there are plenty of spare parts available in Australia, as well as in the UK, including some new reproduction items. They are not always cheap, but there is not much that money can't buy. A few things to watch out for :

- Rust : Champs are prone to rust in all lower body sections, including the chassis.
- Rear Differential Pinion : This is known to be the weak point of the whole vehicle. They break, and new old stock items have not been available for years. One fix is to use one from the front diff, cut off the gear, and weld it to a rear pinion shaft – not a trick for the faint hearted , but it has been done !
- Rear wheel brake cylinders : These also operate the hand brake, and are difficult to get complete.
- Electrical : In common with many British vehicles, the electrics will not work and can be challenging to repair, but not impossible.
- Everything else is pretty much a straight forward job !

Pictured below is the editor's Champ, following painting and during re-assembly. (don't you always wish that you had taken more photos ??) The first two photos clearly show the body section, which is bolted to the chassis section. The bulkhead, front guard skirts, floor pan and seat boxes are all welded to the chassis. This section is an absolute haven for rust.



RESTORING AN AUSTIN CHAMP (Continued)



Success at last, the finished product ! (The Editor would like to offer his personal apologies to anyone who has drifted off whilst reading this article, but wishes you all to know that the WVCG assumes no responsibility)

DARWIN WW2 FUEL STORAGE TANKS

Following the bombing of the fuel storage tanks at Stokes Hill on 19th February 1942 in the first Japanese air raid, engineers began looking at designs for fuel storage tanks in underground tunnels to secure them from aerial bombardment. In 1943, contractors Johns and Waygood, began work on a series of tunnels running under the escarpment on Darwin's foreshore. The longest tank was nearly 200 metres in length. Pipe headings connected the rear ends of the tanks to an underground pumping station.

The tunnels were lined with concrete and steel to prevent cracking under bombardment, creating a tank within a tank. By November 1944, the tunnels that still exist today (1,5,6,10, and 11) had all been lined with welded steel sheeting. It became apparent however, that the tanks leaked, as water seeped in between the concrete and steel sheeting, corrosion began. As it turned out, the tanks were never used during WW2. In the 1950's, the RAAF used tunnels 5 and 6 for storage of jet fuel, but following a period of heavy rain, the system flooded and was never used again. If ever you are visiting Darwin, these are open to the public and well worth a look around – fascinating stuff !



ARIZONA MEMORIAL PEARL HARBOUR – VISIT BY MICK JENNER



In early July 2015, I was in Hawaii on a family re-union and took the opportunity to visit the Arizona Memorial at Pearl Harbour. This is still a large operational base, so the authorities have constructed a visitor centre with extensive gardens on the western side of the harbor, easily accessible from Honolulu via the main freeway.

On arrival we were advised that entry to the Arizona Memorial was free, but we were required to book ahead and individual tickets were issued after sighting ID. (Passports for foreigners, drivers licences for US citizens. The base was on high alert due to the recent Independence Day celebrations. A ticket was required for my 2-year old grand-daughter.



There were charges to visit other nearby sites including USS Bowfin (A WW2 submarine), USS Missouri (Where the Japanese surrender was held) and the Pacific Aviation Museum.

At the appropriate time we were taken to an auditorium to view a film of the attack on Pearl Harbour, which included an analysis of prior Japanese history which I thought was very balanced.

The Arizona memorial is only accessible by barge as the ship is located alongside mangroves adjacent to Ford Island across the harbor. We boarded the barge manned by US Marines, and were taken for a short ride across the harbor to the Arizona site where an open memorial building has been constructed across the ship. It is painted in dazzling white and stands out starkly against the mangroves, the water and the nearby ships and buildings.

USS ARIZONA



The USS Arizona was a Pennsylvania Class battleship built for the US Navy and commissioned in 1916. This ship was the second and the last of the Super Dreadnought battleships. During the bombing of Pearl Harbour on 7 December 1941, she was bombed, exploded and sank with the loss of 1, 177 lives.

Unlike many of the other ships sunk or damaged on that day, The Arizona could not be fully salvaged, though the Navy removed parts of the ship for re-use. The wreck still lies at the bottom of Pearl Harbour and the USS Arizona Memorial, dedicated on 30 May 1962 to all those who died during the attack, Straddles the mighty ship's hull. The USS Arizona is today under the control of the US National Park Service, but the US Navy still retains the title. *Arizona* retains the right, in perpetuity, to fly the United States Flag as if she were an active, commissioned naval vessel.



On entry to the memorial you immediately feel the reverence of the building as it sits a distance from the ship still housing some 900 sailors who were unable to be saved when the vessel rolled over and sank.



The outline of the ship is visible from the visitor platform and the housing of one gun is still visible above the waterline. The Arizona still leaks bunker oil, but as the ship is a war grave, no one is allowed to enter it.



Around 2400 US personnel lost their lives during the attack, and their names are inscribed in a marble wall on one end of the memorial.



One interesting feature of the memorial, described to us by the duty personnel, is the ability of former Arizona crew, who survived the war, to be interned in the ship with their former shipmates. To date 9 former crew members have accepted this offer, and their names are inscribed on a separate marble monument on the memorial.

After the visit we had lunch in the extensive memorial gardens, which also has a display of those who lost their lives, and a bronze map of the location of the various vessels during the attack.



On the way back to Honolulu we visited the National Memorial Cemetery of the Pacific, located in the crater of a huge extinct volcano, which houses around 13,000 headstones of US and allied personnel who died in the Pacific during WW2.

Mick Jenner

WVCG CHRISTMAS EVENT 2015



PROPOSED CLUB CHRISTMAS RUN TO PIKE AND JOYCE WINERY IN THE ADELAIDE HILLS

The Club is proposing to hold the Christmas meeting on Sunday 6th December at the Pike and Joyce Winery in the Adelaide Hills, followed by a 3-course Christmas meal provided by the Winery. The club will subsidize meal costs to the value of \$20 per head including partners. This is to be preceded by a little club run through the hills.

Members are to meet at the Crafers Park and Ride at 1200 hours. Military vehicles are preferred, however civilian vehicles may be used. Member's partners are most welcome.

Meal costs are \$70 per head, of which \$20 for each member and their partner will be subsidised by the club. Wines, beers and other drinks are available for purchase.

Members interested in attending should contact Rick Shearman or Mick Jenner, so numbers can be finalized.

A Pike and Joyce Winery menu appears on the next page ...

SEE YOU THERE !!!





Three Course Set Menu Package – Saturdays & Sundays

Name
Contact Details
Event / Function
Date
Event Time
Number of Guests

Pike & Joyce Wines "On Top of the Hill" Cellar Door of Lenswood
Set Menu Packages • Adults - \$70 per person • Children U 12 yrs - \$15 per child

Food

So we can offer the freshest, seasonal produce available our menu changes weekly and can be viewed on our website from Thursday onwards, prior to your Booking date/time.

- **Entrée** Choice of our Two Entrée options
- **Main course** Choice of Four options as determined from our weekly menu
** All Mains served with Complimentary sides of shared sides of Roasted Seasonal Potatoes and Seasonal Greens
- **Dessert** Individual Set Dessert of the week OR Shared Cheese Plates for the table

Any dietary requirements: gluten-free, lactose-free, vegan and vegetarian need to be notified at booking time or and confirmed within 48 hours prior to your booking date/time.

Beverages

Choose from our Wine List of Pike & Joyce Wines, Pikes Beers, Joyson Cider, Soft Drinks and Juice. Sparkling Water and Filtered Water and Barista prepared Tea & Coffee. These are available to purchase on consumption on the day of your Event.

A non-refundable deposit of \$10 per person is required to secure your booking. This is payable by credit card over the phone on 08 8389 8102 or in Cellar Door and is deducted from your final bill. Final confirmation of numbers is required 48 hours prior to the date of the event and any decreases in numbers after this date may still require the total amount to be paid.

****Pike and Joyce will not accept BYO Cake. If you require a Celebration Cake our Patisserie Chef is happy to assist you with your needs.**

Paulette Joyce

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BREAKING NEWS : NAZI TREASURE TRAIN FOUND ?



A Nazi train rumoured to have gone missing during the final stages of World War Two while carrying away a fortune gems and other treasures ahead of advancing Soviet forces has reportedly been found.

A Pole and a German claim they have discovered the location of the train, in a secret tunnel, under Ksiaz Castle, in Poland's south west district of Walbrzych. Under Polish law, the pair are entitled to a ten percent share in the value of the find, so to date it is in the hands of lawyers. Investigations are continuing

*** WANTED ***



Wanted : Your editor is a collector of military marching compasses, amongst many other things, so if anyone knows of any for sale, it would be very much appreciated. Similarly, if any club member wishes to place a "Wanted" advertisement for anything , just let your editor know, he won't charge you very much !!



è UPDATE ç

The last edition of Bartread featured an article on the Australian Army Land Rover Perentie. As an update to that article, Australian Frontline Machinery has just auctioned a vast array of spares, with more to come. If anyone is chasing good Perentie spare parts, these auctions are well worth a look.



HAVE A LAUGH !



**FOR
SALE**



We have a new style Club Baseball cap for sale to members. They are Khaki in colour with the WVCG logo, and are for sale to club members for the bargain price of \$20 each. These are selling fast, so go on, let a few moths out of your wallet and purchase one! If you are interested, please see our club treasurer, Mick Jenner.

The following items are for sale by
Tony Van Rhodda. Tel : (08)
85362627 email :
gumbrae@acenet.net.au



New MB or GPW Jeep rear seat backrest ,
priced to sell at \$60.00



Vietnam era- Full harness 2
basic pouches, 3 water
bottles, bum pack on web belt
and harness, including olive
drab hootchie : \$75-00



Coleman 60 second tent (10 x 9 foot)
as new, only used once, includes new
rain cover. Plus brand new large
heavy duty stretcher – the lot for \$350



Vietnam era – Back
pack. Good condition.

Going cheap at \$35.00



Large ammo box. 46
cm W x 22 cm D x 16
cm H. Priced to sell at
\$35.00



WARTIME VEHICLE CONSERVATION GROUP COMMITTEE

2015 - 2016

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