



Volkswagen T-Roc concept.

# April 2014

IN THIS ISSUE: Race volunteers wanted The Toy Department Bill's Country Buggy story Camden Show

Apia NSW Tennis Bill Moore tribute Shannons Wheels ACT Plus lots more...



Club VeeDub Sydney.

www.clubvw.org.au

A member of the NSW Council of Motor Clubs. Also affiliated with CAMS.



## **Club VeeDub Sydney** Committee 2013-14.

Comm		J-14.		
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VW Motorsport Com				
Brian Walker		hn Ladomatos		
Andrew Corless	Norm Robertson (JP)			
General Committee:				
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Leigh Harris	Grace Rosch			
Norm Elias	Jeff Swords			
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Vice-Chair:	Rhiannon Walker	rhiannon_w@live.com.au		
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#### **Club VeeDub membership.**

Membership of Club VeeDub Sydney is open to all Volkswagen owners. The cost is \$45 for 12 months.

#### Monthly meetings.

Monthly Club VeeDub meetings are held at the Greyhound Social Club Ltd., 140 Rookwood Rd, Yagoona, on the third Thursday of each month, from 7:30 pm. All our members, friends and visitors are most welcome.

#### **Correspondence.**

Club VeeDub Sydney	or	Club VeeDub (Secretary)
PO Box 1340		14 Willoughby Cct
Camden NSW 2570		Grassmere NSW 2570
		(02) 9534 4825

#### Our magazine.

Zeitschrift (German for 'magazine') is published monthly by Club VeeDub Sydney Inc. Members with email details receive Zeitschrift as a full-colour PDF from our website. Printed black and white copies are available in limited numbers at the meetings.

We welcome all letters and contributions of general VW interest. These may be edited for reasons of space, clarity, spelling or grammar. Deadline for all contributions is the first Thursday of each month; late submissions will be held over.

Opinions expressed in Zeitschrift are those of the writers, and do not necessarily represent those of Club VeeDub Sydney. Club VeeDub Sydney, and its members and contributors, cannot be held liable for any consequences arising from any information printed in the magazine.

Back issues are available as full-colour PDFs from the Editor at the monthly meeting - please bring your own USB stick. Old issues (2006-on) are also available at www.clubvw.org.au Articles may be reproduced with an acknowledgment to Zeitschrift, Club VeeĎub Sydney.

#### We thank our VW Nationals sponsors:

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Please have respect for the committee members and their families by only phoning at reasonable hours.

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jay\_1965vw@hotmail.com

(02) 6254 1142

# Classic Car Day Sunday 13th April 2014

Robertson

From 9:30am

We are inviting all owners of historic cars (30 years or older), to come along and display their vehicles for the admiration of the public and other car buffs. This is a fund raising day for the heritage railway station, which is a volunteer organisation. We are asking for a donation of **\$5** from each attending vehicle which will enter each car in a lucky car draw. The winner will take home a nice prize. There will be no trophies or contests at the 2014 event. It will be a fun day to see beautiful historic vehicles on display, with the Railway selling hot food and a gourmet coffee van in attendance. All are welcome to what will be our 6th Car Day. Please come along. **Club Veedub will have a Volkswagen display** - **all members are invited to show off their VWs.** 

Location: Robertson Railway Common. Take the motorway to Mittagong, Bowral and Moss Vale. Follow the Illawarra Highway to Robertson. Turn at Yarranga Street (Motel on corner) or Meryla Street (Pub on corner) and follow signs.

Venue: Robertson Railway Station is a National Trust-listed heritage structure. We regularly host visits by the famous steam trains from the Thirlmere Rail Transport Museum. The station complex consists of well preserved railway buildings, the 'Fettlers Shed' Art Gallery and the Railway Village Common picnic area and park. Vintage Machinery Display. There will be an interesting display of restored and functioning farm machinery and tractors.

Attractions: Robertson has rolling green hills, rainforests, magnificent waterfalls, stone fences and lush countryside. Beautiful Bowral, heart of Bradman country, is only 20 minutes away. Autumn colours are a feature of this region and Easter is a particularly lovely time to drive through the highlands. The Illawarra Fly Treetop Walk, with its stunning views over the ocean, is only 15 minutes away and can be enjoyed on your way to or from our fun day.

Village: Has a wonderful old pub, one of only two wooden pubs in NSW, with a sunny deck and bistro, bowling club, cafes, gift and antique shops, and a fantastic Country Market open on the day. All are within an easy walk of the Railway Common.

Gallery/Station Museum & Kiosk: RHRSI will be running a kiosk selling famous hot pies, meals, cold drinks, coffee etc. The station also has an interesting history display showing the history of the railway and the engineering feat of building this busy rail freight line.

Contact: Steve Carey, (02) 4885 2393

#### Club Veedub convoy:

Meet at Uncle Leo's fuel roadhouse at the Crossroads, Liverpool, at 7:30 am for coffee and an 7:45 am cruise departure to Robertson.





# Enjoy a weekend away with your loved one.

Club Veedub Sydney 27<sup>th</sup> VW Nationals show.

24<sup>th</sup> May 2014 Super Sprint, Wakefield Park, Goulburn NSW. 25<sup>th</sup> May 2014 VW Nationals Show, Fairfield City Showground NSW. Contact David Birchall (02) 9534 4825 or clubvw.org.au

# Norm's FISH & CHIPS Run to Lithgow.









 8:00 am meet at McDonalds at the M4 service area Eastern Creek, west-bound for an 8:15am departure

Lithgow Small Arms Factory Museum

- To Lithgow Small Arms Factory Museum, Methven Ave Lithgow. A fantastic display of Australian technology. Please register with Norm if attending, to assist the museum guide(s) and for catering.
- Then cruise to Lithgow Workers Club, 3 Tank St Lithgow, for lunch. The oldest surviving licenced club in Australia! Excellent bistro lunch menu; kids' meals.
- Peer-judged trophies for most popular Air-cooled and Water-cooled Volkswagens. Lucky door prizes too!

This event is for ALL Volkswagens - Air and Water-cooled!

Good food, Good Company. Kids welcome!

Norm Robertson: (02) 4625 7057 (message) 0409 771822 (mobile SMS) nrobertson46@optusnet.com.au



## Von dem Herrn Präsident.

This month we lost another great person in VW family. Bill Moore - or as he was often called, 'county buggy Bill' passed away late last month. I attended his funeral as well along with some other club members in Nowra. Bill's funeral was well attended with members of the Shoalhaven VW Club forming a guard of honour. Bill's brother and his mate made very touching eulogies. Steve Muller also did a eulogy which was also very well spoken. There is a tribute to Bill and his work on Country Buggies in this issue.

The next few months are very busy, with some great events coming up. We have a run down to the Classic Car Day at Robertson on Sunday 13th April; meet at Uncle Leo's Caltex at Liverpool Crossroads at 7:45am for an 8am cruise departure.

On Sunday May 4th the Berry Blast From the Past show is on at Berry, hosted by the Shoalhaven VW Club. Its well worth a drive down (see the flyer), as the local markets are on at the same time. The show will be in celebration of Bill Moore.

Then our major event, the VW Nationals, over the weekend of May 24th & 25th, the Supersprint on the Saturday at Wakefield Park and the show n shine at Fairfield Show grounds.

I just put my entry in for the VW Nationals Supersprint. We are offering an incentive this year to attract more female competitors! They will only have to pay  $\frac{1}{2}$  price entry fee, so if the lady in your life feels the need for speed, tell her to get an entry in.

Chris Fraser our Supersprint secretary tells me that entries are a bit slow coming in. Please don't leave it to the last minute, or worse still, to the actual day to enter! You can make everyone's job a lot easier on race day if you:

1. Make sure your club membership is up to date and you have a membership card with you;

2. Have gained your CAMS licence well before the event, and all your CAMS paperwork with you on the day. If you already have one, make sure it's up to date.

3. Get your entry form in ASAP so that Chris can start processing it early to get you in the correct class on the day.

Otherwise this is another job that must be done on the day, which wastes valuable time on the day and can affect how soon we get on the track and how many runs you get on the day. See the club website for all information.

Our club is very short on CAMS trained officials to help out at the Supersprint. If you would like to learn how to gain your CAMS qualifications please contact Rudi 0418 442 953 and he will tell you how to go about it.

You can also pre-enter the Sunday Show 'n' Shine, which will also make your entry faster and easier. We will also need people to help us out on the day, doing simple jobs, so if you can lend us a hand to make everything go smoothly, please let me know.

Norm is planning another run in June, this time to the munitions museum in Lithgow, so keep an eye on the flyers and club calendar in the magazine, and on the club website for more details about upcoming events. There's plenty happening and we'd love to see you and your VW (old or new) at an event. I recently took my Beetle to an event called Powercruise, I had a ball and everybody there kept asking

where were all the other VWs? I was the only one. Next time it's on I'm defiantly going so I will let you all know the dates and details. See you soon,



Steve Carter

# Kanberra Kapitel report.

Hi Canberrans, well we finally got some rain, just in time for the season change. This month we have had cars on display at the annual Shannons Wheels carshow, you should find a report in this magazine. In April we were planning on a cruise to Gold Creek, but had some problems scheduling it due to other local events, school holidays, Easter, etc, so have put it off for a later date.

On Sunday 6 April there is a local event called VW Drive For The Community, raising funds for the Canberra Hospital. With any luck we hope to get a report and pictures from this event for next month, as it promises a VW convoy through Canberra and some family activities afterwards.

In May there is of course the VW Nationals (Goulburn/Sydney) on 24-25th, as well as the Berry VW show on Sunday 4 May. It seems that most people want to make their own way to these events, so lets hope for some big turnouts to these shows. Details for the Nationals Supersprint are in this issue, or check the club webpage.

We are also working on a Bungendore cruise for June, so keep your eyes open for this one.

Club events look great when we have members wearing

club shirts, we have a good quantity ready to sell, contact us if you would like to get some details and sizes, etc.

Happy Dubbing!



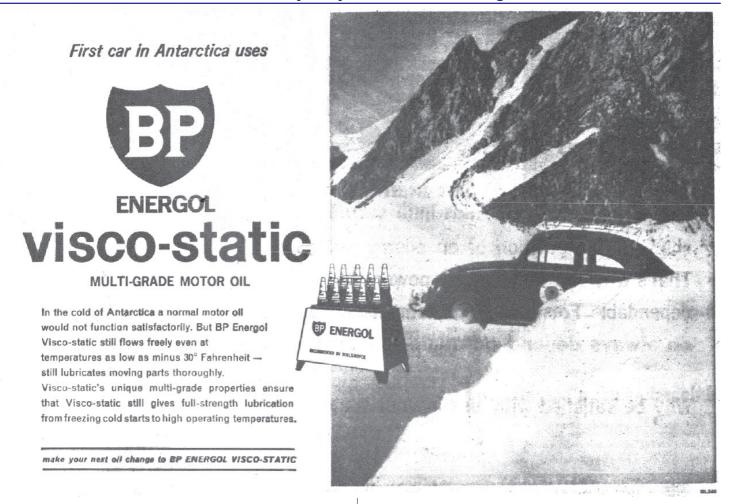
Bruce

# Klub Kalender.

\*\*\* All information correct at time of printing but subject to change - events are sometimes altered or cancelled without notice. Check www.clubvw.org.au for the latest information and any changes.

## April.

**Sunday 13th:- Robertson Classic Car Show** at Robertson Railway Station, in the Southern Highlands. Cars 30+ years old wanted! Entry from 9:30am, \$10 to show your VW, or free general admission. \$5 raffle tickets to rauise funds for Robertson railway. No judging or trophies this year; just a fun day to show your car. Country market stalls, vintage machinery, antique stores, food and drink stalls. **Join the** 



Club Convoy at Uncle Leo's Caltex, Liverpool Crossroads, at 7:30am for 7:45am departure.

Thursday 17th:- CLUB VW MONTHLY MEETING at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (right next to Potts Park). Get the latest VW news and views, plus VW socialising, drinks, raffles, trivia and plenty of prizes. Lots of fun, all welcome. 8:00pm start.

**Monday 28th:- Canberra General Meeting** at the Canberra Labor Club, 16 Petrie Plaza, Civic, at 7:30pm.

### May.

Thursday 1st:- Magazine Cut-off Date for articles, letters and For-Sales.

Sunday 4th:- Berry Blast From The Past show at Berry Showgrounds. Gates open at 9:00am. \$15 entry, includes an event plaque. Gold coin donation for non-showers for a look around. All funds to Shoalhaven Cancer Council. Berry markets to explore. Hosted by Shoalhaven VW Club. Join the Club Veedub convoy at Uncle Leo's Caltex servo, Liverpool Crossroads, at 7:00am for a 7:15am departure (135 km and 1 hr 40 min via Wilton, Mt Ousley, Wollongong and Kiama)

**Thursday 8th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

**Thursday 15th:- CLUB VW MONTHLY MEETING at the Greyhound Social Club**, 140 Rookwood Rd. Yagoona (right next to Potts Park). Get the latest VW news and views, plus VW socialising, drinks, raffles, trivia and plenty of prizes. Lots of fun, all welcome. 8:00pm start.

#### Saturday 24th:- VW NATIONALS

**Supersprint** at Wakefield Park Circuit, Goulburn. VW racers wanted, air AND water-cooled. Stock is OK. CAMS Licence and helmet required. Phone Rudi Frank on 0418 442 953 for more information.

**Sunday 25th:- VW NATIONALS 2014** at Fairfield Showgrounds. Australia's biggest Volkswagen show - 45 show categories, trade stands, swap meet, new VW display, kids'rides, German dancing, great food and drink, VW fun all day. Phone David Birchall on (02) 9534 4825 for more information, or see www.clubvw.org.au

**Monday 28th:- Canberra General Meeting** at the Canberra Labor Club, 16 Petrie Plaza, Civic, at 7:30pm.

#### June.

Thursday 5th:- Magazine Cut-off Date for articles, letters and For-Sales.

**Thursday 12th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

Thursday 19th:- CLUB VW MONTHLY MEETING at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (right next to Potts Park). Get the latest VW news and views, plus VW socialising, drinks, raffles, trivia and plenty of prizes. Lots of fun, all welcome. 8:00pm start.

**Sunday 22nd:- Norm's Fish n Chips Run 2014.** A relaxing family cruise! Meet at McDonalds M4 Eastern Creek westbound at 8:00am cruise to Lithgow Small Arms factory. Then lunch at Lithgow Workers. Trophies for best air and water-cooled VWs, plus lucky door prizes. All VWs welcome! Please book your attendance with Norm - phone 0409 771822 or email nrobertson46@optusnet.com.au

Sunday 29th:- Rattle n Hum Car Show at the Castle Hill RSL, 77 Castle St Castle Hill. Classic cars, hot rods and muscle cars. Entry \$20 with tropies on offer. Enjoy a suasage sizzle, free kids' rides and entertainment. VW owners meet at Hungry Jacks at The Junction, North Parramatta (Windsor Rd opposite Bunnings) at 7:30am for an 8am cruise to Castle Hill.

**Monday 30th:- Canberra General Meeting** at the Canberra Labor Club, 16 Petrie Plaza, Civic, at 7:30pm.

## July.

Thursday 3rd:- Magazine Cut-off Date for articles, letters and For-Sales.

Sunday 6th:- Bugs and Buses By The Bay 2014, at Croudace Bay Park (Belmont) on the sunny shores of Lake Macquarie. All Volkswagens welcome - Bugs, Buses, Buggies and all other new and old VWs that don't start with B. BBQs and shelters. Bring a picnic basket! Kids' playground and skate park. Contact Rose and Ian on 0427 550203 or email avwnut@bigpond.com

**Thursday 10th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

Thursday 17th:- CLUB VW MONTHLY MEETING at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (right next to Potts Park). Get the latest VW news and views, plus VW socialising, drinks, raffles, trivia and plenty of prizes. Lots of fun, all welcome. 8:00pm start.

**Monday 28th:- Canberra General Meeting** at the Canberra Labor Club, 16 Petrie Plaza, Civic, at 7:30pm.

#### August.

Monday 28 July - Sunday 3rd:- Volkswagen Spectacular 2014 at Valla Park, Nambucca Heads. 30th Anniversary! A full week's itinerary this year. Cruises, observation runs, lap dashes, tappet cover racing during the week. Saturday 2nd is VW convoy from Valla to Nambucca Heads and closed street display. Club challenge. Sunday 3rd is the Show n Shine at Valla Park with Top 10 trophies. Charity auction, live bands and entertainment. Bookings essential. Contact Donna on 0427 695203 or email vwspectacular@gmail.com Webpage www.volkswagenspectacular.com

Thursday 7th:- Magazine Cut-off Date for articles, letters and For-Sales.

**Thursday 14th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

Sunday 17th:- Shannons Sydney Classic 2014 at Sydney Motorsport Park, Eastern Creek. Organised by the CMC. The largest gathering of classic cars (1,900+) in NSW. Doubledecker bus rides, trade stands, historic race cars, parade lap of the track. Club VW will again have a Volkswagen display. You must book with Dave Birchall (02) 9534 4825 to gain an entry/display ticket. This year we are celebrating 40 years of the VW Passat in Australia.

**Thursday 21st:- CLUB VW MONTHLY MEETING at the Greyhound Social Club**, 140 Rookwood Rd. Yagoona (right next to Potts Park). Get the latest VW news and views, plus VW socialising, drinks, raffles, trivia and plenty of prizes. Lots of fun, all welcome. 8:00pm start.



Monday 25th:- Canberra General Meeting at the Canberra Labor Club, 16 Petrie Plaza, Civic, at 7:30pm.

# Marktplatz.

All ads should be emailed to: **editor@clubvw.org.au** Classifieds are free for Club Veedub Sydney members, and \$10.00 for non-members. All ads will be published here for two months. All published ads will also appear on our club website,

www.clubvw.org.au Photos can be included on the website but not in Zeitschrift. All ads will appear in Zeitschrift first so our members have first chance to see them. They will then be transferred to the club website on the third Thursday of the month.

Non-members please post us a cheque or money order for \$10.00, payable to: Club Veedub Sydney, c\-14 Willoughby Cct, Grassmere NSW 2570.

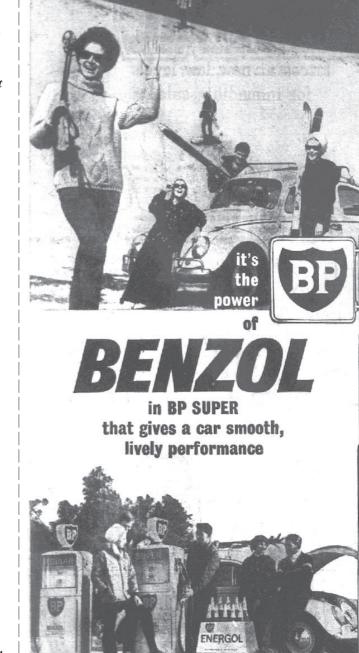
### New Ads.

For Sale:- VW Genuine Parts from 1960-1974 model Beetles and Kombis. Engine overhaul parts, main bearings (std and oversize), conrod bearings, cylinder heads, clutch parts, gearbox mountings, tail pipe and damper kits, blinker switches, starter motors, generators, alternators, and many hard-to-get original NOS VW parts. Contact Lorenze on (02) 9630 1048 (Northmead).

For Sale:- Hi, My mother has just inherited a 1973 VW Fastback TLA 1600 from a good friend. The lady she inherited it from bought the car new and owned it ever since. It is very original and just has typical wear for a 40 year old car. I thought a VW enthusiast may be interested in it rather than just putting it in the classifieds. I will obtain photos and more info if you think someone would be interested. The car is located in Newcastle NSW. Please contact Mr Steven Woods on 0428 485668 or email stevewoods11@hotmail.com

For Sale:- I have a copy of a Volkswagen workshop manual, 'Scientific Publications workshop manual No. 46'. Do any of your members want it? It's about 25 years since I owned my beetle. I would like to see it go to someone who would find it useful. Please contact Mr J Duggan on email harridug@bigpond.net.au

**For Sale:-** My friend was given a **white 1972 Beetle** converted to a convertible. They have been using it for a few years, but it is not really well suited to long commutes in the country. They now want to sell it. It is the sort of car that should really go to an enthusiast, rather than just try to sell it on ebay or car sales. It is registered, doesn't leak oil or blow smoke, but if you don't use it for a while the battery goes flat. Has some rust that has been fixed. It is currently in Bathurst, but we can get it to Kellyville if we think we can find a buyer. Is this something your club members might be interested in? As i said, it is something that should really go to an enthusiast. We just want a fair price for it. Please let me know. (PS - I love my Golf VI) If you are interested, please contact Mr Michael Viset on 02 9836 2968 or email michael\_viset@hotmail.com



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Frontline in showroom condition. 22,700km Silver in colour with Grey-blue interior, pop top, alloy wheels, seat upgrade. See more details on caravancampingsales.com.au Asking Price \$64900 Call Hans Oechslin on 0413121012 or email hroechslin@gmail.com

Wanted:- VW Beetle 1600 (Superbug). Hi all, I am looking for a Superbug in reasonable condition to restore. Needs to be

For Sale:- 2011 T5 Diesel Camper Van. Conversion by

in or near roadworthy/drivable condition and with minimal/ no rust in floor. If you have a car or know of one please email or text with photos and information. Pay max of \$1900. Contact Lachlan on 0432581805 OR email lachieh@hotmail.com

**For Sale:- Orange L Bug** for sale. Mech. very good, no rust, excellent tyres, tow bar and electrics, poor paint and interior. Canberra car owned for 15 years. Registered. \$3,000. Please contact Peter Sugden on 0439 491564 or email Peter.Sugden@dfat.gov.au

### 2nd Month Ads.

**For sale:- Volkswagen Superbug, 1972.** Powder Blue and White, new battery, new tyres, new coil and leads, 12 months registration, runs extremely well, has oil leak and some surface rust on pillars but overall a very pleasing car. Would be a great restoration project. \$8000 ONO. Please contact Alan Craddock on 0412 540854 or (02) 9645 2029.

For Sale:- Front roof-rack for VW Kombi Campmobile, plus genuine VW Campmobile tent. Roof rack is galvanised, and fits above the driver and passenger roof. It includes all mounting brackets and hardware. The VW camper tent annex is orange and comes in its own bag. Both items have been in storage for many years. \$200 for both or will split if you negotiate. Contact Len Donaldson on (02) 9639 7377 (AH).

For Sale:- VW motors and spare parts. Type 1 German AS21 Industrial case standard 1600 in pieces plus other items. Also 1x 2BR Brazilian case - machined, cured to 92mm piston barrel kit plus extras. Many hard to find spare parts also for sale. No longer doing project, genuine seller wanting to declutter. If you are interested, please phone Willliam Lenon on 0421 165686 or email lenon@iprimus.com.au

For sale:- I have 2 manuals for VWs for sale if anyone is interested. 1. Gregorys No.46 Volkswagen Beetle Models 1954/1971 Hardcover 2. How to Keep your Volkswagen alive. Step by Step procedures for the compleat idiot 1200-2000 Hardcover. Pls advise if anyone is interested. \$60 for both. Please contact Ms Anne Malsbury on 0407 909718 or email anne.malsbury@rdasydney.org.au

Wanted:- Hi, I am looking for a second hand engine or a reconditioned engine for my VW Caravelle (1990), watercooled 2.1-litre. It seems very hard to find one as I called a lot of mechanics now. Can you maybe help me?If you can, please phone Anika Bruns on 0449 788985 or email Anika-Bruns@gmx.de

**For Sale:-** This yellow 1975 Superbug L 1600 has had 3 owners, one for 28 years, the second for 4 and myself for 7. This is a great car with low km, straight body and good engine. All receipts from myself and previous owner. Service by the late Ben Durie and Nymeyer Motors in Newcastle and under the previous owner, Andrew Dodd. Aways garaged. But like all non-restored cars of this age it needs some work. It was rust proofed in 2009 but has some rust in the usual spots (front pillars and one spot on a back vent) along with



some surface rust. Some rust on bumpers and wheels. Floor has been cleaned and rust-proofed but still has original soundproofing along with new carpet. No leaks. New window scrappers. Has been painted since new, not sure when. Original number plates. Engine, brakes and suspension in good condition. Registered till December 29014. Will sell with roadworthy. In Newcastle. \$5,000. Photos on clubvw.org.au and carsales.com.au. More details from Bryan at bh@wildwattle.com.au or 0423 079 588.

# Klub Korrespondenz.

#### Dear Phil,

Thank you so much for the information on the 1946 Beetle in our collection - the famous Haenel VW, the first privately-imported VW to arrive in Australia (*see January* 2014 and January 2010 issues of Zeitschrift - Ed). The car has recently been having a facelift. The chrome bumpers have become very rusty, and the cost of replating \$1500, so we have repainted them with chrome paint. The passenger window has been giving trouble so this is now fixed.



Our aim is to have it capable of going to various shows under its own steam. I always have this dream of restoring it back to black! (it was damaged by LNC Industries in the 1970s when it fell off a car transporter. It was repaired and resprayed from black to light grey/blue).

I personally had a Type 3 coupe. With this I won Car of the Show at the 'Bug In' in WA. I have also driven a Kombi from Istanbul to Bombay, through Afghanistan. Now we have a Jetta which I love, as I drive from Perth to York and back every day – 320 km!

Once again thank you for your interest. Rest assured the car is being looked after. We also have our mechanized VW floorpan on show again. Make sure you visit when next you are in WA.

Yours sincerely,

Peter Harbin Curator, York Motor Museum York, WA



# directory.

CamdenGTI Performance

**Trades and services** 

Service, Repairs and Parts



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Snap Kingsgrove

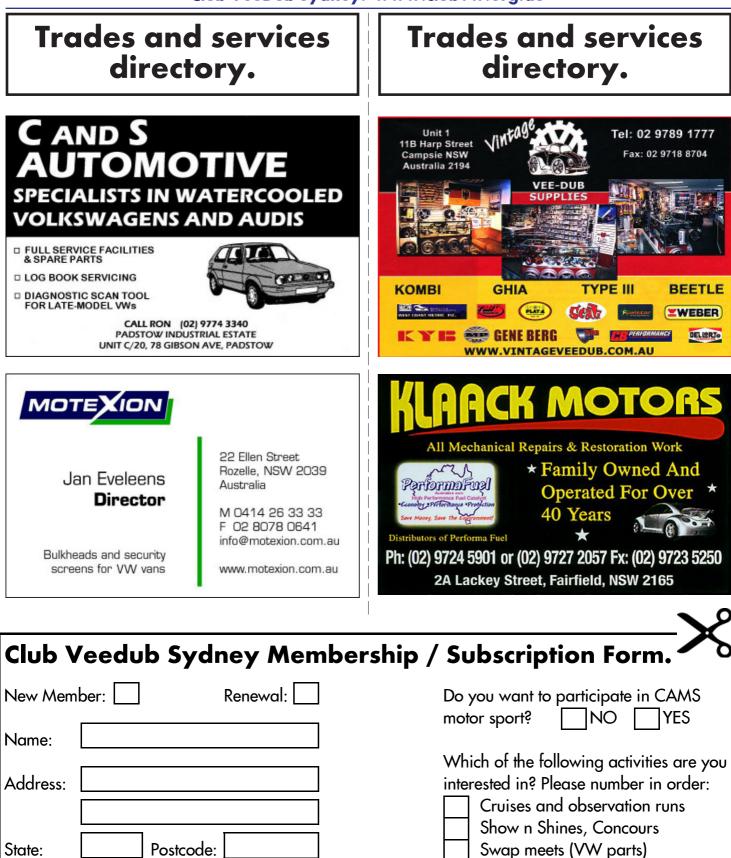
171-173 Kingsgrove Road

kingsgrove@snap.com.au vww.kingsgrove.snap.com.au

KINGSGROVE NSW 2208

Unit 3.

P 9502 3777



(BH) (AH) (Mob)

Email:

Phone:

Social days and/or nights out

Drag or track racing Meetings and tech talks

Other (you tell us!):



# Club Veedub Sydney Membership / Subscription Form.

Please tell us about your Volkswagen(s):

Year	Model	Engine Size	Rego No.	Colour	Please enclose a cheque or money order for <b>\$45.00</b> ,
					payable to Club Veedub Sydney, and post it with this
					form to:
					- Club Veedub Sydney,
					PO Box 1340
					Camden NSW 2570
					You will receive 12 issues.

# **R-Line Golf and Beetle.**

Volkswagen R-Line packages are now available to order for the Golf and Beetle in Australia.

The Golf R-Line package can be optioned on the \$31,990 Golf 103TSI Highline and \$34,490 Golf 110TDI Highline models at a cost of \$2200.

Exterior changes includes sports suspension (lowered by 15mm), 'Progressive Steering' that alters the steering ratio based on driver inputs; 18-inch alloys, front bumper extension and larger lower air intake, widened side sills, sportier rear bumper with black diffuser, a rear roof spoiler, tinted rear glass, and R-Line badges.

Inside sees changes, too, with sports seats finished in 'Race' cloth with micro-fibre side bolstering, a flat-bottomed leather-lined steering wheel, steering wheel-mounted paddleshifters, aluminium brake and accelerator pedals and door scuff plates (front), black headlining and 'Black Lead Grey' inlays on the dash and doors.

The Beetle R-Line package costs \$2000 over the regular Beetle (\$29,990). It includes fewer items, but still gains sportier bumpers front and rear, body-coloured wing mirrors, 18-inch alloys, R-Line badges, sports seats, aluminium scuff plates, steering wheel-mounted shifters for auto models, and dash-top gauges with boost pressure, oil temperature and stopwatch readouts.



Volkswagen also offers the Touareg V8 TDI R-Line locally, but Volkswagen Australia public relations manager Kurt McGuiness said the addition of the Golf and Beetle isn't indicative of a full-scale rollout of R-Line versions of all models.

"It's just going to be these models at the moment," he said.

The R-Line packages for Golf and Beetle are available to order now, and the first stocks of R-Line cars are due to arrive this month.

# No Golf 7 GTD for Australia.

The new-generation Volkswagen Golf GTD will not be sold in Australia.

Hot on the heels of reports there will soon be a dieselpowered Ford Focus ST, Volkswagen Australia is not planning to offer its Golf GTD diesel hot-hatch, which is essentially an oil-burning twin to the Golf GTI, anytime soon.

Volkswagen Australia general manager of



communications, Karl Gehling, said that the brand doesn't plan to offer the GTD "at this stage".

"As we said when we launched Golf last year, we are reducing complexity in the range and focusing on the core models," Gehling said.

The previous Golf 6 GTD, at \$39,290, was positioned very closely to the \$40,490 five-door GTI, but Volkswagen's pricing strategy for the current Golf range sees the top-end 103TDI priced at \$36,490, leaving little room for the GTD to slot in among its sibling models.

Volkswagen will instead continue to offer the fivedoor-only Golf GTI range (priced from \$41,490), with a quicker Performance Pack model priced at \$47,990. The new Golf R will also be sold here, but pricing for that variant is yet to be announced.

As also reported in this month's Zeitschrift, Volkswagen also has revealed a new Golf GTE model, powered by a 1.4-litre four-cylinder petrol engine teamed to an electric motor for combined outputs of 150kW and 350Nm. That model is also unlikely to be offered here.

# No VW Taigun either.

The Volkswagen Taigun will not enter Australia's booming sub-compact SUV market in the foreseeable future, with the local division declaring it is not under consideration for our market.

Speaking at last month's launch of the all-new Golf wagon, Volkswagen Australia communications general manager Karl Gehling said that while production was expected to begin soon, the sub-compact Taigun was "not something that we're considering".



At just 3995 mm long (including its tailgate-mounted spare wheel), 1728 mm wide, 1570 mm high, and riding on a wheelbase 63 mm longer than an Up!, Gehling said the Taigun was too small to interest Australian buyers. It is 250 mm shorter, 37 mm narrower and 138mm lower than the Ford EcoSport.

"We don't see that there's demand for that small an SUV in this market, so it's not something we're considering," Gehling said.

First seen as a concept car at the 2012 Sao Paulo motor show and again in revised form last month at the 2014 Delhi auto sho, the Up!-based 998 kg Volkswagen Taigun teams an 81 kW/175 Nm turbocharged 1.0-litre petrol engine with a six-speed manual transmission.

Featuring 17-inch alloy wheels and a 280-litre boot capacity (expandable to 996 L with the rear seats folded down), the Taigun is set to go on sale in overseas markets by 2015.

# **CrossBlue SUV - yes.**

On the other hand, Volkswagen Australia has confirmed it is "very keen" to offer local buyers the production version of the large seven-seat Volkswagen CrossBlue SUV to fill a gap in its existing product range.

Speaking at the local launch of the all-new Golf wagon, Volkswagen Australia communications general manager Karl Gehling said a seven-seat production car based on the 5.0 m-long six-seat Volkswagen CrossBlue concept would be "a nice fit for us in this market".



"At the moment it's been confirmed in left-hand-drive only so we don't have any plans at this stage, but obviously we've made it clear that if there were further development of that program to include right-hand-drive markets we'd be very keen to offer it locally," Gehling said.

"Clearly we don't have a seven-seat SUV in the line-up and it's one of the opportunities we'd like to be able to fill at some stage.

"I think it would do very well."

Larger than the current 4.4 m-long Tiguan and 4.8 m Touareg, but expected to be priced somewhere between the two, the CrossBlue was confirmed for a 2016 North American launch in January though is not expected to reach European showrooms before 2019.

A potential rival for the Mazda CX-9, the all-wheeldrive CrossBlue concept - which debuted at the 2012 Detroit auto show - is based on the Volkswagen Group's MQB platform and features a plug-in hybrid drivetrain comprising a diesel engine, two electric motors, a lithium-ion battery and a six-speed dual-clutch automatic transmission.

Volkswagen has previously said that the model could support both hybrid and conventional petrol and diesel powertrains.

The CrossBlue concept was followed up by the Range Rover Evoque-rivalling five-seat plug-in Volkswagen CrossBlue Coupe concept at last year's Shanghai auto show, later shown at the Los Angeles auto show in November with revised efficiency claims of 3.4 L/100km and a pure electric range of 20.9 km.

# Golf Alltrack a possibility.

To further Volkswagen's push into the lucrative SUV market, a high-riding AWD Golf Alltrack station wagon variant will join Volkswagen's popular small car line-up, and the local division is keen to introduce the model to Australia.

Confirming plans for the rugged Golf wagon, Volkswagen Australia communications general manager Karl Gehling said the forthcoming Golf Alltrack is one of the variants under consideration for our market.

Gehling said, "We're very keen to be able to offer it. It's still some time off but it makes sense. We've had good response for Passat Alltrack and in this market there's clearly a demand for a bit more off-road-ish action."

Likely featuring an increased ride height, improved approach and departure angles, steel underbody protection panels and redesigned bumpers with durable plastic cladding, the variant would follow in the footsteps of the Passat Alltrack and Volkswagen Group cousins, the Audi A4- and A6-based Allroads and the Skoda Octavia Scout - the latter recently revealed in new-generation guise.

Volkswagen's 4Motion four-wheel-drive system is also be expected, along with the Off-road system employed by both the Passat Alltrack and Tiguan compact SUV.

With the \$47,790 130 kW/380 Nm 2.0-litre turbodiesel Passat Alltrack commanding a \$1300 premium over its front-wheel-drive base car, a diesel-powered Golf Alltrack could ask around \$37K, positioning it just beneath the \$38,990 Subaru Outback.

Volkswagen has hinted at a Golf-based Alltrack model in the past, unveiling a Golf Plus-based CrossGolf concept at the 2010 Geneva motor show. Further back, the distinctive Golf 2-based 4WD Golf Country was actually built by Steyr-Daimler-Puch in Austria from 1990-91, based on standard



Golf CL Syncro hatches provided by Volkswagen. Steyr-Daimler Puch added some 430 parts to the standard Golf, and built 7,700 of them. They were popular in snowy Europe but were never sold in Australia.

# **Updated Polo range.**

As revealed last month, the expanded Volkswagen Polo range shown at the Geneva Show includes two new BlueMotion variants that claim to be the most fuel-efficient non-hybrid petrol and diesel five-seaters in the world.

Volkswagen claims combined cycle fuel consumption of 4.1 litres per 100 km for the new petrol-powered Polo TSI BlueMotion, and just 3.1 L/100 km for the upgraded Polo TDI BlueMotion diesel, giving the latter a theoretical driving range of 1400 km.

Powering the Volkswagen Polo TSI BlueMotion is a turbocharged 66 kW 1.0-litre three-cylinder engine, while the TDI BlueMotion employs a new 55 kW 1.4-litre three-cylinder turbo-diesel.

The Polo BlueMotion duo features low rollingresistance tyres and other aerodynamic enhancements, including a broad grille bar, side skirts and unique alloy wheels, in their pursuit of optimum efficiency.

Joining the BlueMotion variants is the updated Volkswagen Polo BlueGT.

The BlueGT's uprated 1.4-litre four-cylinder turbo petrol engine produces 110 kW and 250 Nm (up 7 kW), and thanks to its active cylinder management system, which shuts down two cylinders under certain driving conditions to save fuel, claims combined cycle consumption of 4.8 L/100 km. Six-speed manual and seven-speed dual-clutch automatic transmissions are available.

The Polo BlueGT teams the exterior updates of the face-lifted city car with a sports body kit and lowered suspension, and is available with the newly developed Sport Select suspension that features electronically controlled dampers.



The Volkswagen CrossPolo also benefits from a midcycle update, and now features smoked tail-light lenses, redesigned alloy wheels, and new paint colours and seat materials. Depending on the market, the Polo crossover will be available with a turbocharged petrol engine or two diesels.

As with the rest of the range, an automatic postcollision braking system is now standard, while adaptive cruise control, city emergency braking, driver alert, front assist, and a rear-view camera are all available optionally.

The updated Volkswagen Polo range will reach Australian showrooms in the second half of this year.

Volkswagen Australia says it is too early to say whether any of the newly announced variants will join the regular range on our shores at this stage. It would depend on RHD model availability, which are sourced from VW's Uitenhage plant in South Africa.

# Golf GTE revealed.

Tagged a sporty plug-in hybrid, the Volkswagen Golf GTE joined the existing GTI and GTD variants in the Golf 7 hatchback range at last month's Geneva motor show.

The Golf GTE - the 'E' stands for 'Electric' - combines some of the sports styling cues of the Golf GTI hot-hatch with the petrol-electric plug-in hybrid powertrain of the Audi A3 e-tron that's due to launch later this year.

The Volkswagen Golf GTE pairs a turbocharged 110 kW/250 Nm 1.4-litre four-cylinder petrol engine with a 75 kW/330 Nm electric motor, which combine to produce 150 kW of power and 350 Nm - leaving it just 12 kW shy of the regular petrol-powered GTI, but matching it for torque, while conversely it's 15 kW up but 30 Nm down on the diesel GTD.



The electric motor takes its power from an 8.8 kWh lithium-ion battery that is charged from a socket hidden behind the Volkswagen badge in the radiator grille. The motor is housed within the Golf GTE's six-speed dual-clutch automatic DSG - the same number of ratios as the GTD, and one down on the GTI.

Volkswagen claims the Golf GTE can accelerate from 0-100 km/h in 7.6 seconds (matching the A3 e-tron, and just 0.1 sec slower than a GTD) and power on to a top speed of 217 km/h.

VW also claims an ultra-frugal combined cycle fuel consumption of just 1.5 litres per 100 km and average CO2 emissions of 35 grams per kilometre, compared with a 4.2 L/ 100 km sticker on the GTD.

Volkswagen says a full recharge from a wallbox or public charging station takes approximately 2.5 hours, and provides a pure-electric range of 50 km and - with a full tank of fuel - a total driving range of 940 km.

Volkswagen has not released specific details about the GTE's chassis at this stage and its similarities with the GTI or GTD, but says the suspension tune offers "sporty handling and high levels of comfort".

A blue radiator and headlight crossbar replaces the GTI's red strip and GTD's chrome strip, while the headlamps, indicators, parking light and number plate lighting use LED technology. Side skirts and a roof-edge spoiler provide

parallels with the other GT models. 'Aerodynamic' 16-inch alloy wheels are standard, with 17s and 18s optional.

Blue highlights also feature on the steering wheel, gear lever, door inserts and tartan upholstery. A 6.5-inch touchscreen infotainment system combines the usual audio, climate and connectivity functions with a number of hybridspecific functions, including an energy flow display and a satnav function with a 360-degree circle around the car showing how far it can travel at any given time.

A 'Car-Net e-Remote' app allows drivers to program a departure time and air conditioning, and view charging, vehicle data and vehicle status information from their smartphone.

Volkswagen Australia said last month when rumours of the GTE were swirling that is was too early to say if the GTE would be considered for our market.

# Volkswagen T-Roc.

A production version of the Volkswagen T-Roc concept is expected to reach the market by 2017.

At the concept's unveiling at last month's Geneva motor show, Volkswagen head of research and development Heinz-Jakob Neusser told reporters that building the subcompact T-Roc SUV would be "the logical conclusion".

"We'd like to build the T-Roc," Neusser said. "We've shown many SUV concepts in the past 24 months - many of them ready for production."



Tipped to launch in three to four years' time, the T-Roc is set to become the fifth member of Volkswagen's SUV family, joining (by that time) the second-generation Tiguan, third-generation Touareg, the recently revealed Taigun baby SUV, and the forthcoming CrossBlue seven-seater.

The Volkswagen T-Roc (the name is expected to change before it hits showrooms) will inherit its MQB-based underpinnings from the Audi Q1. Volkswagen's version is set to launch shortly after its premium cousin that's confirmed for production in 2016.

At 4179 mm long, 1831 mm wide and 1501 mm tall, the T-Roc concept is 248 mm shorter and 22 mm wider than the Tiguan, and its roofline sits 185mm lower to the ground. The T-Roc's 2595 mm wheelbase is also just 10mm shorter than that of the Tiguan. The three-door concept weighs 1420 kg, comparing closely with the Nissan Juke AWD.

The concept borrows the Golf GTD's 135 kW/380 Nm 2.0-litre four-cylinder diesel engine, and its six-speed dual-clutch automatic transmission sends power to all four wheels via Volkswagen's 4Motion system.

The production model will feature a range of smaller petrol and diesel engines and come standard with front-wheel drive, reducing weight and promising fuel economy gains.

The T-Roc claims 0-100km/h in 6.9 seconds and combined cycle fuel consumption of 4.9 litres per 100 km.

Three selectable driving modes - Street, Off-road, and Snow - allow drivers to customise the characteristics of the car's throttle response, transmission, AWD system, ABS, and hill start and descent assist functions.

The T-Roc concept previews Volkswagen's newgeneration SUV design language, featuring headlights incorporated into the wide horizontal grille, flared wheel arches, heavily contoured bonnet and side panels, and a broad rear with angular LED tail-lights.

Removable roof panels that can be stowed in the boot and cameras mounted in the headlights and at the rear that allow drivers to monitor off-road terrain are less likely but believed not to be entirely out of the question for the production car.

The display of the T-Roc concept's 31-cm instrument cluster screen adapts according to the selected drive mode, while its digital climate control system allows occupants to set a 'perceived temperature' - not simply the temperature of the air stream - for different areas of the body.

Blue Splash metallic trim lines the dashboard, console and door inserts of the four-seat cabin, which will gain a fifth seat in final production form.

# Kombi Alltrack.

The all-wheel-drive Volkswagen Multivan Alltrack concept has been unveiled at last month's Geneva motor show, hinting at a future production version.

Powered by a 132 kW/400 Nm 2.0-litre four-cylinder turbo-diesel engine, the Volkswagen Multivan Alltrack concept teams a seven-speed dual-clutch DSG automatic transmission with a rear axle-installed multi-plate Haldex coupling to offer all-wheel-drive traction.

Following a trend seen on the Volkswagen Passat Alltrack, as well as fellow Volkswagen Group models the Skoda Octavia Scout and Audi A4- and A6-based Allroads, the Multivan Alltrack features an increased ride height, protective grey plastic cladding and matt silver underbody protection panels.

Riding on 19-inch alloy wheels, Volkswagen claims a 21-degree approach angle and a 15-inch departure angle. Inside the multipurpose van is blue Poltrona Frau natural



leather upholstery, dark brown wood trim accents, an eightinch infotainment touchscreen and a Dynaudio Surround Sound system with a centrally-mounted speaker.

A mobile kitchen module with a gas cooker and a sink also takes pride of place in the concept's rear, mounted securely via the van's versatile floor track system.

Until a production version of the concept is announced, the currently available Volkswagen Mutltivan TDI400 Highline with 4Motion, starting from \$77,990, will have to suffice for Australian buyers.

# 65 years of VW in USA.

In January Volkswagen of America celebrated a milestone - 65 years since the first Beetle arrived in the United States. In January of 1949, a Volkswagen Type 1 was shipped to New York City by Ben Pon, a Dutch businessman and the world's first official Volkswagen importer. That car - and later a second Beetle - found buyers the same year, marking the first time that Volkswagen vehicles were sold in the United States.



The Beetle led to the establishment of the first Volkswagen of America headquarters in Englewood Cliffs, N.J., in October 1955. In 65 years, Volkswagen has grown from selling two Beetle models in the US to a brand that offers 11 different models that are sold by 644 dealers. In 2013, Volkswagen sold 407,704 vehicles, its second straight year of selling more than 400,000 vehicles and the first time this feat had been achieved since the 1970s.

By the mid-1950s, more than 35,000 Beetle models were on the road, and by 1960, nearly 300,000 had found buyers. Americans were not only drawn to the affordability and practicality of the early Beetle, but were so charmed by its unique design, its size, and its fuel economy that they'd forged an emotional bond with the cars.

From custom paint jobs to open-top dune buggy bodies, the Beetle fit perfectly into the counter-culture of the 1960s. By 1968, as many as 425,000 Beetle vehicles a year were being sold in the United States. The last US Beetles were imported in 1977, replaced by the modern water-cooled Rabbit (Golf) and Dasher (Golf). The last German Beetles were made in 1978 (Cabriolets in 1980).

While the modern VWs became hugely popular in Europe, Americans never embraced Rabbits and Dashers quite the way they did the old Beetle. Even a US factory in Pennsylvania making the Rabbit, and US-designed Rabbit Pickup (1978-88) couldn't halt the sales slide. By the early 1990s VW of America was selling less than 90,000 cars in the USA. VW considered pulling out of the USA entirely.

Then Volkswagen introduced the New Beetle in 1998, a vehicle styled in the USA that paid styling homage to its predecessor, although its engine was water cooled rather than air cooled, and mounted at the front rather than at the rear. Designed specifically for the US market to connect with enthusiasts of the original Beetle, it resurrected VW's US sales to over 200,000 a year.

Redesigned for just the second time in history, the third-generation Beetle entered the US market in 2011. While staying true to its roots, today's Beetle would be unrecognizable to buyers in the 1950s, thanks to its Golf combination of powerful and fuel-efficient engines, surefooted handling, and myriad technology and safety features. The 2014 Beetle earned a 5-star Safety Rating from the Government's New Car Assessment Program (NCAP).

The third-generation Beetle sold more than 43,000 units in the United States in 2013, making it one of the most popular vehicles in the Volkswagen family, and a leading player in the market for two-door specialty coupes and convertibles. Unusually, Americans still don't appreciate the hatchback Golf, so popular elsewhere in the world, and the booted Jetta and US-made Passat are today the best-selling VWs in America.

# Last Type 2 in museum.

A Brazilian politician tried to save it at the last minute, unsuccessfully, so the final 'Last Edition' Volkswagen Type 2 Kombi was produced in Brazil on December 20, 2013. The very last example now resides in a vintage museum at Volkswagen's Commercial Vehicles HQ in Hanover, Germany.

The 'second generation' Type 2 Volkswagen was built for 46 years, starting in September 1967 and following on from the 'first generation' split-window Type 2 that first appeared in 1950. Brazil didn't assemble the T2 until 1994, but was the last country still assembling it. Australia ceased local assembly in 1976, and Germany replaced it with the new T3 Kombi in 1979, which was in turn replaced by the front-drive T4 Kombi in 1991, and the current T5 in 2003. Mexico made the T2 'Combi' until 1994; South Africa made the more modern T3 'Volksiebus' until 2002.

Brazil had updated the original T1 to a 'T1.5' in 1975, using a T1 body shell with T2 nose and tail. This continued



until 1994, when Brazil acquired the former Mexican tooling to make the complete T2. The Brazilian T2 Kombi was the last air-cooled VW anywhere in the world after the Mexican Beetle ended in 2003, but in 2006 the 1600cc engine was replaced by a modern water-cooled 1.4-litre Polo-based 'Flex-Fuel' engine that could run on any ethanol mixture from E10 to E100.

But in 2013 new safety regulations in Brazil requiring airbags and ABS on all cars, finally spelled the end for the T2c Kombi. When one politician tried to introduce a bill that would pardon the 'Bus from a death sentence, it couldn't garner the required number of votes for passage. Brazil produced 1.5 million of the 3.5 million T2 total, theirs made in the home of Copacabana beach and the girl from Ipanema.



Five generations of Transporter.

Press and Public Relations

Technically, only the T1, T2 and T3 Kombis were VW 'Type 2's, as described by their chassis numbers or VIN codes. The front-drive T4 in 1991 is a new line, with a VIN code of 70, and the current T5 is a model 7H. But while the modern Transporters are not 'Type 2s', they are still members of the same 'Transporter' or 'Kombi' family line.

So while the old T2 (and T1, T3 and T4) Kombis are now dead, it is NOT the end of the 'VW Kombi'. The famous model line lives on, now available as the modern, powerful and fuel-efficient TDI T5 Transporter available today at your local Volkswagen dealer.

# Race volunteers wanted.

Well folks its that time of the year, when we appeal to you the member and ask you to VOLUNTEER some of your time.

As the Club runs on VOLUNTEERS you can assist to run our Supersprint. We need 24 VOLUNTEERS to run this event.

We have training available from Southern Sporting Car Club and other Clubs at their scheduled Supersprint Events, just like ours on these dates;

- \* Sunday 13th April Wakefield Park
- \* Saturday 26th April Eastern Creek

\* Saturday 10th May Eastern Creek

After one meeting on application you will be issued with your CAMS Officials Log Book.



We need YOU this year so give a Motorsport Commitee member a call. Couples most welcome.

Don't leave it till the last minute help the Club have its roster drawn up so we can plan for a successful VW NATIONALS SUPERSPRINT.

#### Dress for Track Marshals.

Wakefield Park weather can be 4 seasons in one day. Hat or Beanie, gloves and sunglasses and slip, slop, slap.

Layer clothing dress for cold.

Avoid synthetic outer garments. Wear cotton or wool. Footwear should be leather if possible.

Now you are ready!!!

Take your preference of snacks and thermos.

You will be fed lunch plus snacks and drinks (this is hard work).

Folding chair is handy as it is a long day and your camera for those shots that will closeup.

Enjoy the day knowing that the event will be a success due to your efforts.



#### **Volunteers roster.** Office Admin.

Scrutineer(s)

Caterer

2. Bob Hickman
3. Wayne Murray
4. VACANT
1. Rudi Franks
2. VACANT
1. Martha Adams

1. Chris Fraser

Start/Finish	1. Norm Robertson 2. Martha Adams 3. VACANT
Dummy Grid	1. Chris Fraser
Flag Marshals	1. Ashley Day
	2. Andrew Corless
	3. Craig Adams
	4. Joe Buttigieg
	5. VACANT
	6. VACANT
	7. VACANT
	8. VACANT
	9. VACANT
	10. VACANT



11. VACANT

This is schedule of VOLUNTEERS and VACANCIES that still exist so call a Motorsport Committee member to and register to give a hand.

Norm Robertson 0409 771 822 nrobertson46@optusnet.com.au



includes timing transponder hire. In an attempt to attract more women to the sport a discounted entry fee of \$85 applies. After 17th May all entries will be \$200, so be quick.

There is a maximum of 2 entries per car. Licence Fee is \$115 and is valid for 12 months and covers driver insurance. See CAMS website for details.

Drivers must have an approved helmet and correct clothing. Competing cars must be fitted with an approved indate Fire Extinguisher with a metal mounting bracket, and a two-stage bonnet catch (cable and catch). Early Beetles need additional restraint such as a belt through bonnet handle and around bumper.

Paperwork and online payment is available at www.clubvw.org.au/2014-supersprint Note that even if you pay online you still need to send me the entry form either email or post to address on the entry form.

Could you please pass these details on to your friends and fellow club members. Any questions or further information, please contact me at supersprint@clubvw.org.au

Chris Fraser

#### Entries now open.

Club VeeDub is holding its 6th Wakefield Park supersprint on 24th May, as a sideshow to the 27th Annual VW Nationals car show.

The event is open to Club Veedub members, and members of all other CAMS affiliated car clubs. All makes and models of cars are invited; Club Veedub members should be driving a Volkswagen (old or new). Non-VW drivers should be members of another CAMS club such as Wollongong Sporting or Southern Sporting.

Pre entry fee is \$170 until 17th May which





# Apia NSW Tennis.

As many of you many know, the Apia International Tennis Tournament was on at Sydney Olympic Park from 5 to 11 January, sponsored by Volkswagen Group Australia. I put my hand up to be a volunteer driver, and took 6 shifts; three afternoon shifts (midday - 6.00pm) and three night shifts (5.30pm – midnight).

The first shift was a bit nerve wrecking. Driving in the city at peak hour was like driving in a war zone. Pedestrians and cyclists are your worst enemies, and you never know when a pedestrian or cyclist would suddenly cross your path. One night I witnessed a cyclist zig zagging along between cars, lost his balance and almost landed under a taxi, lucky for him he got up and walked away.



I learned to drive in and out of the city going to the airport via the Eastern Distributor and Southern Cross Drive and from the Olympic Park to the airport via King Georges Rd and the M5 tunnel - Marsh St and you're there at the airport. The athletes stayed at the The Western in Pitt St, just past Martin Place.

I had the pleasure of driving two VW T5 2-litre TDI vans, and one Passat station wagon. All had push button hand brakes, and BlueMotion technology - the engine cuts out at traffic lights when your foot is resting on the brakes. Jumping from driving an old Kombi to a brand new Volkswagen I found it hard to keep the speed under 60 km/h. They are rocket ships. I had to keep a close watch to the speedo because

you only had to touch the accelerator and zoom, you're doing 60 km/h.

On my last shift, Friday the 10th, I accidentally locked myself out of the vehicle. I left the keys in the boot compartment and closed the boot lid. We called the NRMA road service who responded within the hour (no, it wasn't Steve). It took him 20 minutes to open the driver's door. He used a key which was hollow in the middle and then inserted an O ring tool to lift the spring inside which was a bit tight, being a new car.



The Apia International Sydney was originally called the New South Wales Open, and is one of the oldest tennis tournaments in the world, first played in 1885 at the Sydney Cricket Ground. It later moved to the famous White City grass courts at Rushcutters Bay, where it was played for 76 years up to 1999. In 2000 it was moved to its current location, the hard-court Sydney Olympic Park tennis centre.

Australian John Bromwich won the NSW Open a record 7 times, from 1937-49, but the greatest number of wins is by the great Margaret Court with 8 wins from 1961 to 1973. She also lost 3 more finals in that time, making 11 NSW finals in total, a record unlikely to ever be beaten. The last Australian girl to win was Alecia Molik in 2005, while Bernard Tomic won in 2013. This year's Womens title was won by Tsvetana Pironkova from Bulgaria, beating the German Angelique Kerber. The Mens was won by Juan Martin del Potro, who beat Bernard Tomic 6-3 6-1.

The photos you see are of me with Bernard Tomic after he had qualified for the final, volunteer drivers sitting around





waiting for a call and the model girl from Volkswagen posing in front of a new black Beetle.

Joe Buttigieg

# The Toy Department.

Lately many of us would have noticed that the gift and novelty industry has been very keen to produce some fairly large tin VW model replicas.

Some of these are quite good examples and my favourite one for the best detail would the VW kombi fire truck as shown below.



Some other examples are quite hideous and don't deserve a mention and appear to be cross between a T1 and a T2. So with a lot out there to choose from go get yourself one as these make good conversations starters when friends come over and because of their rustic nature go well outside by the Bar B Q or entertainment area or anywhere for that matter. Some of these have a "rat" look about them, but why

LUIL CALLE



stop there? It's not a real 'rat' unless it has some rust and I mean real rust.

Here's one below I bought in Hawaii this year nice looking VW bus but in need of some rust and a few dings for good character. Before:



After:



You will need the following to complete the process. \* Angle grinder ( or sharp file)

- \* Nail punch
- \* Live by the sea ( or some rock salt)

Well the rest is obvious leave your VW out in the rain for a few weeks and nature will take care of itself.

Tony Bezzina kbezzina@bigpond.com



Rochfort's '72 Cabriolet. In 1990 he was Treasurer again, and took on the Sales-Merchandising role in addition, replacing Les Robinson. He was elected Treasurer for a third year in 1991, but Caro Martin took over Sales that year.

In 1992 Bill's work transferred him and his family to Brisbane, so he had to reluctantly give up his committee roles (Caro took over as Treasurer). Bill even had to sell his 1973 Type 3, 'Casper', that he and Shirley had bought at Boris' Picnic Day four years earlier. But he stayed in touch and remined a Club member.

In 1993 he and Shirley bought a brand-new white 'B3' Passat from

# Vale Bill Moore. (1949-2014)

With great sadness I announce the passing of VW enthusiast and historian Bill Moore, better known to many of us as 'Country Buggy Bill.' Bill single-handedly researched the little-known VW Country Buggy history, and brought the story to the world.

Bill was not only involved in historical aspects of VW in Australia, but an active Club member who held commitee positions and helped organise VW events all those years ago. Bill joined Club Veedub in 1987 when he bought a black 1955 oval Beetle. He had it registered on vintage plates (number 018) just in time for the first VW Nationals in 1988, where he won 2nd place in Best Unrestored Oval Beetle that year.

He quickly became an active club member. His corporate banking expertise came very much in handy when he was elected Treasurer at the 1989 AGM, replacing Steve Carter. Here is his black '55 on display at the 1989 Motor Club Show, together with Rocky Marov's '76; Andrew Fraser's Type 3; Graham Lees' VW 181; and Michael



Muller & Muller, one of only twenty or so ever imported. It was featured on the cover of the February 1994 issue of Zeitschrift.

In 1996 Bill was instrumental in helping set up the Volkswagen Classic and Vintage Club, and creating and maintaining his Country Buggy Register. In more recent times, after retirement to Nowra, he has been a major force behind the Shoalhaven VW Club and the Berry 'Blast From the Past' VW show. His collection also includes a beautiful 1958 Kombi with a rare Australian camper conversion.



Bill was a great mate who will be remembered and treasured by many in the VW community. He leaves behind his wife Shirley, daughter Allison and his grandchildren. Aged 64, may you rest in peace Bill.

Funeral service arrangements were held on Monday 31 March at the Worrigee crematorium in East Nowra, followed up by a gathering at the Nowra golf club. The Shoalhaven VW club had earlier arranged a VW escort for Bill from the Owen Funeral home in Nowra, to the crematorium.

Club VW Sydney has sent flowers to Bill's family, and

our thoughts are with them.

Anyone seeking more information please call me on 0400 356057.

Stephen Muller (Club VW Sydney President, 1986-1992)

I would like to thank Bill for his valuable assistance on my own book, Knowing Australian Volkswagens, that was published in 1994. He was always happy to assist, pointing out numerous errors and adding new information. This was also true for the re-written Australian VW history pages, now available under the Reference tag on the Club webpage. Bill did some fantastic research on the two Army VWs that came to Australia in 1948. Thank you Bill - Ed.

Prior to Bill's historical research, there wasn't too much known about the Australian-designed and built Country Buggy. It was usually not mentioned at all in UK or US VW books and magazines.

It was mentioned however, in the German VW magazine Gute Fahrt to which our then-secretary Rod Young used to subscribe. The article below was published in 1990 (it has been translated from German). It was about the most we had ever read about Country Buggies at that time, and made a good starting point for Bill's research.

#### Australia's Country Buggy the Beetle as a bush car

#### Gute Fahrt magazine, 1990

At the end of the 1960s a beach and bush car based on the Beetle was created in Australia: the Volkswagen Country Buggy. There was a small series of nearly 2,000 cars.

The Volkswagen Australasia company in Melbourne was created as a subsidiary of Volkswagen AG, founded in 1954 at the Clayton factory in the Australian state of Victoria. Produced locally were the Beetle and Transporter, and the VW 1500/1600 series (sedans and station wagon). Some parts necessary to the assembly were mainly imported. Other construction components were produced in Australia or were bought by ancillary companies. Today only complete vehicles are imported.

At that time, however, the Australian Volkswagen engineers designed and constructed their own car - a light, allterrain car on a Beetle base. The Volkswagen Country Buggy was introduced to the public in February 1968 after a fiveyear development and preparation time. This included a three-year field trial to test the suitability of the new design under everyday conditions.

In parallel with the presentation ran an advertising campaign started to make to the Country buggy popular. After the course, for two Australian dollars, an original coloured sales prospectus was available. For a nominal fee, the brochure was sent to interested prospective customers.

The Country Buggy seemed to fit the special needs of the Australian market.

The chassis used was the solid, very well proven central tube platform of the VW Beetle. The chassis was used unchanged, as well as the front axle and the engine.

The VW Transporter (Type 2 T1) contributed the transmission and rear axle. The rear axle was equipped with

the well-known hub reduction boxes. This increased the ground clearance by a few centimetres. Axle ratio and gear ratio have been adapted accordingly to the changing conditions.

Serving as a drive unit was the air-cooled four-cylinder boxer engine from the VW Beetle. The customer had the choice between the 1200 engine with 34 PS (40-bhp SAE) or the 1300 version with 40 PS (50 bhp SAE). The complete electric arrangement (6 volts), the hydraulic brakes, the petrol tank and many other parts also came from the Beetle. The exhaust with its two pipes arranged longitudinally to the direction of travel, and the elevated exhausts came from the Transporter and were later used on the German VW 181.

The open, smooth-flat all-steel body was uncomplicated and practical. The voluminous skirts with their side panels moved far upwards not only ensured the required torsional stiffness, but also allowed for an excellent fording depth. The raised side sections prevented the penetration of water when driving through streams.

Fuel tank, spare wheel and battery were largely protected from the effects of the weather, located in the front and with an easy to reach bonnet top. The engine sat in the rear. Thanks to the upward opening tailgate, maintenance and adjustment work was no problem.



Australiens Buschwagen aus den Sechzigern: Der Country Buggy – ein geländetaugliches Allzweck-

Auto mit glattflächiger Stahlblech-Karosserie auf dem Käfer-Fahrwerk

Due to the short body overhangs, the relatively large ground clearance (23 cm) and the 15-inch wheels the Country Buggy had no significant problems in difficult terrain. There was also a surcharge for self-locking limited slip differential on the rear axle. Fitted out in such a way the Country Buggy could even keep up with all-wheel-drive vehicles.

The Country buggy was available as a right-hand or left-hand drive and cost about \$1,500 Australian dollars. In addition to this, there was still a sales tax. For extra charges as accessories was the choice of a fibreglass hardtop (instead of the normal canvas top), tyres with a chunkier off-road profile, a limited-slip differential, and a protective shield for the engine.

The Country Buggy was also usable as an agricultural utility vehicle. With the help of a 'power take-off' option, the 1300cc version with just a few simple steps could be converted to a mobile industrial engine, for instance, for driving of a water pump or for the generation of electricity.

In spite of all these obvious advantages, the Country Buggy was no great economic success for Volkswagen

Australasia. Between 1968 and 1972 there were just 1,956 Volkswagen Country Buggies produced. Even today some still roll on Australia's roads.

Hans Joachim Klersy

Below is a much more detailed history and technical description, written and researched by Bill Moore.

Bill's Country Buggy Register can be found at www.volksculture.com/group/country-buggy-register

### The Country Buggy.

The original concept for the Country Buggy was developed at the plant complex at Clayton Victoria in the early 1960s, at a time when VW was achieving excellent sales and acceptance on a local and global basis.

The Australian Army had been in discussion with Volkswagen Australia re the possibility of producing a small robust four wheel drive vehicle to suit local conditions. The Army considered VW would be a top contender to provide additional vehicles suitable for the Army as they had experience with the Type 2 Kombis from 1959 onwards.

VW Australia saw other uses for a similar vehicle but was not keen on a 4WD unit which would put them head to head with existing 4WD manufacturers.

Under the control of the Engineering manager, Cyril Harcourt and Quality Control Director Rudi Herzmer, a draft plan and preliminary sketches were put together in 1964. The initial internal name for the proposed vehicle was the 'Kuriewagen' but this name was later abandoned.

In the 1966 Business Report by Volkswagen Australasia Ltd included the following comments with regard to the Country Buggy: •gIn order to meet a number of demands, the Country Buggy (a jeep type vehicle) was engineered.•h

#### Prototypes

In the late months of 1965 construction of the first hand-built prototype vehicle was begun in the Engineering Experimental section at the Clayton factory. When the first was completed a further two prototypes were also constructed by hand. These prototypes underwent almost two years of development work and were subjected to over 50,000 km of brutal field testing through the mud, dust, slush, sand, rugged desert and mountain conditions in the dead heart and far north of Australia. The prototype vehicles travelled around Australia on three separate occasions.

A specially built box trailer was designed for use on these trips, either being towed by one of the prototypes or a Beetle support vehicle. Like the prototypes, this trailer was designed with large side sills and was filled with foam material. The foam assisted all vehicles with creek and river crossings but did not provide 100% flotation as was expected by some of the people involved in the design. The trailer was hand built at the Clayton factory and was the exact same width of the Country Buggy. One special feature was the torsion bar suspension, a real oddity when compared with vehicles at the time. Surprisingly, I found this trailer still remains registered in Victoria today although it has been through a couple of re sprays, replacement of the tray and removal of rust from the side walls. late 1965 to mid 1967, and both 1300cc and 1500cc motors were used at different times. Log books were maintained for each major journey and they include all dates, places, times, fuel consumption, travelling distances, vehicle problems and other related information. The original evaluation log books are still retained by the former Test Evaluation Manager together with original photographs.



In early 1967 the vehicles were introduced to the media and put through their paces at a special promotional event on the Mornington Peninsula, close to Melbourne, to test the versatility and usefulness of the car.

During 1966 work continued on completing the business proposal to Head Office and to seek their approval for the funding to allow production of the Country Buggy. It was mid-1966 when the proposal was finally put to Head Office in Wolfsburg, and the immediate response was not at all favourable. Head Office insisted that two of the prototype vehicles be immediately air freighted to Wolfsburg for evaluation in Germany. A Qantas 707, at great expense to VW Australia, was chartered to fly the cars to Germany for track and mechanical testing.

Unbeknown to VW Australia, Head office had commenced development of a secret design project on behalf of the German Army. On arrival at Wolfsburg the Australian factory employee who travelled with the car was ushered into special project design area of the building. This project turned out to be the Type 181.

On arrival of the two cars at Wolfsburg, one was immediately handed over to the German Army to conduct their own evaluation, and the other was evaluated at VW facilities.

The present location of the two prototypes flown to Germany is unknown. They have never been on view at the Volkswagen Museum. Only a small drawing of one of the vehicles was painted on a partition when I visited the Museum in both 1995 and 1999. Officials of the Museum have advised the cars had never been in their possession. In all likelihood, they were scrapped when testing was completed.

As a result of these evaluations some modifications were stipulated by Head Office and these included;a. Side panels to be ribbed for added strength. b. All foam to be removed and additional cross members welded into side panels. Vehicle design was not to consider flotation capabilities

c. Improved spring plates to be added.

Evaluation of these prototypes was conducted from

produced by VW Germany. All chassis would have been

All known engine numbers were locally produced and

From early January extensive field tests carried out

prior to public release resulted in several problem areas being

b. Shrinkage of plastic in the side curtains make use of zippers

d. Spring plates buckling and snapping under intense stress

f. Body panels cracking at front of box sections under rough

National Service Manager both Harcourt and Herzmer

rectified these problems and the vehicles were ready for

Working with the Test Evaluation Manager and the

The official release date for sales to the public in

for evaluation. However the Army was disappointed with the

Local content of the Country Buggy was to meet the

In the 1968 calendar year the retail sales in Australia

results. They maintained the view the vehicles should have

undulating country, and their payload was insufficient for

Australia was the 3rd April 1968. Sales expectations were

Australian Army was expected to be a major customer. A number of production vehicles were provided to the Army

1,800 units per annum and press releases claimed the

been 4WD despite being very versatile and good in

Army purposes. Not one vehicle was ever sold to the

95% Australian Government standard however official

records indicate a maximum of just over 85% was ever

The demise of Volkswagen manufacturing in Australia

Volkswagen's share of the overall Australian car

market had been decreasing from 1964 where it peaked with a

was 627 units against production numbers of 842.

pressed and numbered during the 1967 calendar year.

a. Water leaking between windscreen/body and hood

c. Rear spring plates breaking at mount holes.

e. Fuse box sealing was inadequate

commenced F125XXX.

identified including;-

impossible.

use

market.

Australian Army.

achieved.

Subject to these changes Head Office provided tacit approval for vehicle production using the following strict conditions:-

a. Maximum usage was to be made of existing Australian components (use what was surplus parts)

b. Investment in plant and machinery equipment for the production line was limited.

c. Production be maximum 1,800 units per annum.

d. Production could not impede existing vehicle production capacity.

e. Use of maximum Australian content to satisfy Government requirements for taxation benefits.

The vehicle was first shown to VW Dealers at a National Dealer Convention in February 1967 in the prototype form. Former factory employees recall the dealers lining up to take turns driving around the Clayton factory.

There was some consternation when the prototype went missing for several hours only to turn up hiding in a very large packing crate at the factory complex. Clearly, one of the Dealers was having a bit of fun.

The prototype vehicle was officially shown to the public at the Melbourne Motor Show in March 1967 together with other models in the Volkswagen range.

An extensive article appeared in the April 1967 Modern Motor magazine together with photos of the prototype, and the vehicle received good press. The article indicated this prototype vehicle would float, had 16 inch wheels and was expected to be released to the public in September 1967. The article indicated the vehicle was a 'cross country type vehicle,' and apologetically, had not even been named by VW. It was further described as a cross between a Jeep and a Moke or, as someone unkindly put it, a 'Joke.'

#### **Production Commences**

Accordingly to official VW documentation the first Country Buggy to come of the production line was in December 1967. Records indicate that no Country Buggies were included in the final 1967 production numbers although there were an unknown number of unfinished vehicles on the production line at 31/12/67.

Following return from Christmas holidays in January 1968 the Country Buggy production increased in larger

numbers and through put on the production line grew. There was only one jig on the production line where hand welding of the bodies took place. The rush was on to complete the vehicles and have then out with dealers for the public sales release on the 3rd April 1968.

Many of the body panels had already been pressed prior to the Christmas holiday break and this was the key enabler to have bodies ready for mating to the chassis on the production line. The chassis were predominately numbered based on the 118310XXX or 118315XXX series although some 1184XXXXX numbers exist. All these sequences were from the standard 118XXXXX sequences

#### Sydney or the Bush.







7.7% share. In 1965 this share reduced to 6.3% down to 4.8% for the year of 1966. The market share figure was 4.3% for 1967 and 3.8% for the first 9 months of 1968.

Figures for the small car market in which VW operated were even more alarming, as new modern British and Japanese small cars were appearing.

In an overall growing market, the loss of share caused considerable financial pressures. In 1965 the company managed a profit of \$1.1 million, but for 1966 there was a loss of \$3.7 million. This was the first year the company had ever recorded a loss on trading. There was another loss for 1967, \$2.6 million. It was unsustainable and required some significant changes to the overall way of doing business.

In December 1967 after an audit by a VW Germany team, plans were developed to implement a major restructure across Volkswagen Australasia Limited and its subsidiaries. In accordance with this study far reaching steps were taken to reduce the manufacturing depth in Australia and to effect reductions in personnel and fixed assets used by the company.

Initially, a new company, Motor Producers Ltd was formed to run the Clayton factory. They applied to the Australian Government for permission to assemble vehicles under an amended local content plan. The former plan called for 95% content, but Motor Producers now sought a reduction to 50% for Type 1, 45% for Type 3 and 45% for the Country Buggy. Government approval was forthcoming.

There was no local content requirements attached to the Type 2 and those vehicles were now assembled in the factory from German-made CKD units rather than Australian panels as before.

Further savings were made during the year through total closure of the Press Shop (body panels) and discontinuation of Engine reconditioning operations. These changes were in place on 1st October 1968.

At the same time a major re-organisation of company structure was underway. The former company, Volkswagen Australasia Limited transferred the Sales, Service and Parts Merchandising to Sydney's LNC Industries Pty Ltd, the existing NSW distributor of Volkswagen and owner of the largest VW dealer chain, Lanock Motors. As a result, LNC acquired all shares previously held by Volkswagen Australasia Limited in Volkswagen Distribution Pty Ltd as well as the major shares in Volkswagen (Services) Pty Limited.

The appointment of LNC Industries as a national sales company to handle all merchandising improved the liquidity of Motor Producers Limited, due mainly to the fact that all spare parts, vehicles and other merchandise were sold to LNC for which Motor Producers Limited received liquid funds. Motor Producers Ltd was then able to substantially reduce their borrowings and to liquidate loans held in Deutsch Marks with the parent company.

In reality, Motor Producers were moving to a role as factory owner and vehicle assemblers, responsible for assembly of imported CKD units. When completed the vehicles were sold to LNC who then marketed, sold and serviced the vehicles. LNC provided vehicle warranties under agreement with Motor Traders who paid LNC for warranty costs.

A further major re alignment of 1968 related to the progressive reduction of fixed assets. This involved substantial transfers of marketing and press shop equipment between Motor Producers and the parent company in Germany, VW de Mexico, VW Brazil and VW South Africa. In addition machine tools and equipment not required by any of the associated companies were sold locally either by private sale or through auction. The net effect of these sales saw some A\$5M reduced from total fixed assets.

At the beginning of 1968 there was 1,653 employees but by December this had reduced to only 971 employees. At the beginning of 1966 there had been over 2,000 employees.

Things had certainly changed during 1968 at the Clayton manufacturing plant.



#### Demise of the Country Buggy

In the official Motor Producers Ltd 1968 Business Report under the title 'Estimated Future Developments' was a note stating "progressive deletion of Country Buggy production."

This confirms that by the end of 1968 a decision to wind down and eventually delete the production of the Country Buggy had already been taken. The timing of this decision was only 8 months after the official release date.

No specific reasons were stated for this decision, but as Volkswagen was getting out of locally manufacturing vehicles; had sold off presses, closed the press shop and disposed of tooling and equipment, there was no likelihood that Country Buggy production could continue. With all body panels for the Country Buggy pressed at Clayton and the press shop closed by the end of 1968, there was no alternative than for production of the Country Buggy to cease.

There have been many unsubstantiated rumours about the demise of the County Buggy including;-

1. There were major design faults which could not be remedied.

2. LNC would not cover vehicles under warranty.

3. The 1500 Beetle was arriving and they needed space on the production line

4. They did not sell well enough to support cost investment 5. Head office pulled the pin as they were not in favour of a competitor to the future 181.

Based on all the information available I now take the position that the reason for the demise of the Country Buggy is a simple one of timing.

Unlike Types 1, 2 and 3, where imported CKD kits could be brought into Australia and assembled, there were no CKD kits for the Country Buggy which could be imported for assembly. Availability of vehicle bodies is a critical part of any vehicle production.

The Country Buggy was developed and commenced production at a time where there were major upheavals in the Volkswagen organisation in Australia and the Buggy was caught up in the ramifications of all these changes.

It was not the vehicle itself but the overall circumstances at the time that lead to the demise of the Country Buggy.

#### Country Buggy Components Floor Pan

The vehicle was based on a Beetle floor pan (no heater control knob opening ) which was pressed at the Clayton factory with Transporter trailing arms on the front and Transporter reduction hubs at the rear. Early model Type 1 spring plates were used to provide additional strengthening.

This combination provided excellent ground clearance (230mm), and with a low gear ratio the vehicle had excellent climbing ability. With a 51 degree angle of approach at the front and 32 degrees at the back, body clearance into culverts and gullies was great.

#### Engine

The vehicle was fitted with a 1300cc Beetle engine as standard but you could order a 1200cc ( !!! ) as an option . Engines were all "F" series and were identical to the Beetle with the following exceptions:-

a. Air cleaner set up was from the Transporter

b. Oil pressure sender unit was mounted in the top of the case and not on the side as with Beetle motors. All engine cases were pressed in the non-ferrous foundry at the Clayton factory.

c. Dual muffler system with twin exhaust pipes emerging through two holes in the rear body panel. Ground clearance of the exhaust pipes was exceptional at 600mm. This also prevented any mud or grass build-up or water entry to the exhaust system.

All the electricals were 6 volt with standard Beetle gearbox and housing.

#### Body

The body was locally designed and constructed from folded flat steel for ease of manufacture and ruggedness. There were no doors and the very high sills on the side prevented water entry when fording through creeks. The tops of the sills were 740mm from the ground. Body panels were all flat or folded and there was no curves or contours on the body apart from the strengthening ribs added to the production vehicles at the insistence of VW Head Office.

The front windscreen was able to be folded forward and rested on well placed rubber holders screwed into the body. The only glass in the car was the front windscreen that was rectangular and flat.

The rear tray area, which was removable, had an area of 13.2 square feet  $(1.2 \text{ m}^2)$  and provided ample storage or load area.

Front seats were very basic and constructed using Beetle lower sections. The uprights were Beetle frames which were cut off and a small curved bar inserted and welded to the frame.. From June 1968 a rear seat was made available as an accessory.

The Country Buggy was basically an open two seater

with a large rear tray area.

#### Component sharing

To satisfy Head Office criteria to ensure maximum use of existing VW parts, the Country Buggy shared the following components with other VWs of the time or earlier;-

**Type 1 (Beetle):** Chassis frame, front axle beam, 50 hp engine with 30-PICT carburettor, 200mm diameter clutch, rear torsion bars and spring plates, transmission with Type 2 ring gear/pinion, steering wheel from Standard split window Beetle (never sold in Australia!), speedometer, fuel tank with reserve tank level and front headlight lenses (rims were black)

**Type 2 (Transporter):** Steering knuckle, king pins, air cleaner with elbow, rear axle tube, axle shaft, reduction hubs, reduction gearing, brake drum mechanism, road wheels and brake components.

**Type 3:** Part of the pedal system, windscreen wiper arm connecting mechanism, steering box and other steering components.



Only 1,956 were ever made in both RHD and LHD and the mix is believed to include some 400 LHD examples.

All vehicles were stamped with a single numberic character "Identification number" starting at 1 under the spare wheel in the front cargo area.

Over the years there has been much controversy about the actual number of Country Buggies produced in Australia back in the late 1960s. The current Volkswagen Group Australia have no records, nor do previous VW importers Inchcape/TKM or Ateco. The VW Museum in Wolfsburg has no records, and no one I have contacted in Australia has been able to produce any official documentation to confirm the numbers. In an effort to try and size the production numbers I decided to commence a Register of known Country Buggies. The Register is based on the "KO" or identification number on each vehicle, which is stamped on a metal plate and welded immediately behind the fuel tank under the front bonnet.

Whilst most Country Buggy owners wish to remain anonymous, and we continue to respect their privacy, we can provide the following information from the Register:

The register has 363 vehicles identified by KO number or by the name of the current owner. A brief summary of the vehicle is provided including original colour (there was only

3 colours) and the current condition. An address by way of town and state is also provided.

Can you imagine enthusiasts' surprise when I can account for 363 Country Buggies which are still in existence? The current breakdown is:

321 vehicles in Australia, 12 vehicles in Malaysia, 11 vehicles in the USA, 8 in Philippines, 3 in New Zealand, 3 in UK, 3 location unknown, 1 in Canada, 1 in Germany. In 1999 the 3 Country Buggies I knew in the USA were the only ones outside Australia, so they are gradually spreading.

Based on all the available information gathered over the years we can make the following assumptions:

1. The lowest known KO number is #1 (Perth, WA) and the highest KO is #861 (Whyalla, SA). It is unlikely the RHD numbers produced exceed 900. Also, two of the prototypes (KO = 0) still exist, one original car in Hobart and one fully restored in Melbourne.

2. If 1,956 units was the actual production number then more than 50% of the vehicles were produced in left hand drive.

3. The right hand drive vehicles were produced and numbered first. There are no Australian left hand drive models on the Register. All USA vehicles are right hand drive.

4. Left hand drive units were only exported to the Philippines (facts provided by former factory employee), where they were sold as the VW 'Sakbayan.'

5. It is unlikely there would be 100 more CBs still existing in Australia which are yet to be identified.

6. 90 % of the CBs were produced in Savannah Beige colour; three are Paprika Red and 13 are painted in official Army green. They were part of an unknown number of trial vehicles supplied to the Army for evaluation in late 1967.



7. After 10 years of investigation this scribe has finally found a single example of the 'Power Take Off' accessory which was available in the vehicle. The unit is fitted to 'Wally' which resides in the careful hands of a delightful lady VW enthusiastic living in Perth. The car has been off the road for the past years but is getting closer to being restored as a daily driver over the next year.

8. Approximately 25% of the vehicles on the register are still registered and used as daily drivers.

As a further extension of the Register, I have commenced a separate Register for known 181/182s in Australia.

I am always keen to get any level of detail, location, sighting to keep the Register updated.

Bill Moore

# Shannons Wheels in Canberra 2014.

The annual car show was held on Sunday March 16 at Kings Park, beside Lake Burley Griffin. Each year the show brings dozens of clubs together with hundreds of cars and other vehicles on display.



Club VeeDub had 16 local cars on show, covering both water and air cooled models, in all conditions and styles. The weather closed in a bit later in the day - thanks to those who attended, it was a great event.

Bruce

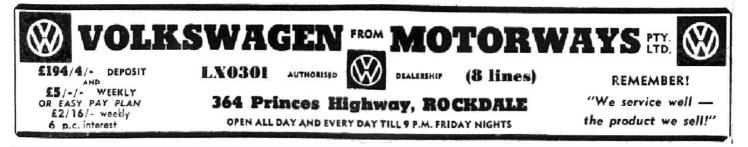














# Camden Show. Saturday 5 April.

Just after we went to press last month, our Club received invitations to attend the Camden Country Show. As part of the 128-year old agricultural show - 'still a country show' – they were holding a classic car display. Those booking in their car would receive free entry.

The two-day Camden Show first started in the 1880s and provides two days of family fun for over 40,000 visitors every year. It's a much smaller, more down-to-earth version of the Royal Easter Show, with the same kinds of thrills and spills in sideshow alley; livestock competitions, rodeo, chooks, horses, dogs, sheep, pigs, goats and alpacas; woodchopping, show-jumping, stunt driving, trade stands - and of course plenty of food and drink and the usual showbags.



It was too late to include in last month's magazine, but we gave copies of the invite to everyone at the committee meeting. I faxed off my booking and was looking forward to showing off the Kombi and promoting our Club at a new venue for the first time. The show was Friday-Saturday, but the classic cars were only on Saturday.

The day dawned very grey, with steady rain. The invites said to line up from 9am, but the show actually opened for entry at 7am. I thought it wise to get there early, as I expected the crowds, traffic and parking to be terrible later on. Lily wanted to come but was sound asleep when I left home at 6:15am.

It was a misty drive to Camden, but the rain had ceased and the sun was peeking out by the time I crossed Cowpasture Bridge and turned right at the first roundabout. The classic car entry was at the rear, from Exeter St. There was only a short queue of utes, 4WDs and horse trailers entering.

The showground entry road was graded dirt and gravel, quite muddy at the edges. The assigned classic car area was a field to the right, but it was gated off when I pulled up. The entry track was a quagmire of churned mud that looked a foot deep. The field beyond looked to be sodden turf and mud. A guide told me the classic car display was cancelled (!) and I was directed further down to a normal overflow parking area.

Oh well. With mud pattering off the tyres I drove slowly down and across the creek, then up to the parking area. I had to leave the gravel road and cross a very muddy verge to get to the grass, where all cars were being directed to park.



So all there was to do now was lock the car and wander off and look at the show. The ground was very wet and muddy; the grass squelched underfoot and the really muddy areas churned by truck and tractor tyres had to be avoided, unless you had gumboots. I was only wearing joggers, and even choosing the harder grass areas to walk I soon found mud splats up to my knees. I saw numerous vehicles bogged.

Ignoring that, though, the show was very enjoyable and just like I remember the Easter Show when I was a kid. The Easter Show is so commercial now and so expensive to visit. Camden is still a real country show. I enjoyed wandering among the exhibits all morning as the weather held off.

The VW dealer at Campbelltown, Paul Wakeling, had a display set up with several new VWs on display. There was only one young girl managing the stand – who had worked at the dealer for less than a month – so I chatted VWs with her





for a while. She gave me one of every brochure, an Amarok bag and drink bottle, while I left her a pile of Club VW brochures to give out.

I bought Lily some showbags, and looked at the grand parade ring (the Onslow Park oval). The entry track was a muddy bog, with a load of pine bark dumped and spread on it. There was no way I was driving my Kombi on that. After buying some yummy churros, I decided to head off home. I walked back to the Kombi, to see Joe Buttigieg standing beside it. He had arrived rather later, and been directed to park much further away. We agreed that the rain and mud had spoiled the classic car part of the show, but the rest was still fun.

I would certainly like to try again at the 129th show next year; hopefully the weather will be a little kinder then and the grounds drier and firmer.

Phil Matthews

## Sydney German Autofest. Sunday 6 April.

The third annual Sydney German Autofest, organised by the Mercedes-Benz Club of NSW, was again held on the grass at Gough Whitlam Park, Earlwood. All German marques were invited, so we were hoping for a good turnout of Volkswagens to match the Mercs, BMWs, Audis and Porsches.

A very well organised and popular show. Here are







some photos of the day. Jeff told me later that the silver Karmann Ghia won a trophy.

Thanks to all the Volkswagen owners – air and watercooled – who came along to support the day.





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# Dialing in your cam - 1.

You've worked all summer to get the bread to build a bitchin' 1776 engine. It's got big jugs, dual carbs, a hot cam and valves the size of dinner plates. You and your buds pull an all-nighter to get it buttoned up in time for school. It fires right up with a lopey idle that sounds way kewl. But punch it, it's a total POS. Nobody knows why. The timing is dead on and the dizzy checked out. Ditto for the carbs. All your buds agree it should run good but it don't. A call to the local guru is no help, 'Bring it in, lemme lookatit.' At a hundred bucks a glance. But at least it runs, sorta, so you drive it. Maybe it will heal or something.

First day of school Mrs. Wilson who teaches Home Ec and drives that bone stock '66 she's had since high school blows you off pulling out of the parking lot. She wasn't even trying to dust you. But she did. Bad. The real killer is that your buds saw it happen.

Before you buy a Toyota or transfer to another school let me ask you a couple of questions. Did you dial in your cam? Did you set up your valve train geometry?

Have you got any idea in the blue eyed world what I'm even talking about?

"Actually, I'm more into computers ..."

Okay then, think of your cam as the engine's BIOS. It tells your valves when to open, how far and for how long. The crankshaft is the Master Clock, with Top Dead Center of #1 cylinder as the zero point. Dialing in your cam loads the program at the right address. With the engine above, put your foot down, it should take off like Mad Max blowing nitrous. But only if the crank and cam are in sync.

So didja? Did you dial in your cam? Because even in a stock engine, stack-up errors can put your cam timing out by as much as 4.5 degrees, more than enough to turn your tiger into a turkey.

The Volkswagen was the world's second economy car (first was the Ford Model 'T'). Its low cost of production is reflected by the spec of its parts, which are pretty loose. Some engines came out of the factory sorta sloppy and some sorta tight but the wide tolerances guarantee almost any engine would run. That's why you don't dial in the cam doing a rebuild. If you don't change the cam gear, odds are the rebuilt will run about as well as the original. But when you use nonstock parts, or even a high percentage of rebuilt parts, the odds run the other way.

When you build a high performance engine from a collection of after-market parts, for the duration of the job you better not be into anything but engines. You're the Mechanic-in-Charge. The chore of making sure things fit falls on you. And one of those chores is dialing in your cam. So didja?

No, don't tell me. Mrs. Wilson already did.

#### Gauging the crankcase

Building a good engine starts with the crankcase, each of which is just a tiny bit different from every other because of normal variations in tooling wear and production tolerances. The differences are tiny but they're important. Ignore them and it's like building a house on a foundation that's off level by just a tiny bit. The higher you go, the worse it gets. By the time you put the roof on, the thing is leaning like a drunk. One of those tiny differences is the distance



between the centreline of the crankshaft and the centreline of the camshaft. It's not a bunch but if you ignore it, by the time you get out to the valves your high performance engine isn't.

Because of that difference Volkswagen used nine sizes of cam gear, from +4, through 0, to -4. (The size is stamped on the back of the gear. It reflects a change of 0.01mm on the diametrical pitch.) About 95% of factory-built engines use cam gears near the zero size, with a nominal range of about +2 to -2. Align boring, which Volkswagen used to do on all their rebuilt engines, dictates the need for the other sizes. How well the gear fits determines how rapidly it wears. Good fit, slow wear. Good fit also means good performance since the fit effects your cam timing and valve train geometry. So that's where you begin.

Immediately after checking the fit of the main bearings to the crankshaft and case, the driver gear is installed on the crank and the crankcase is gauged to discover what size cam gear is needed. One of the most practical ways to do this to is to obtain three stock cams for use as gauges. With a +2, a 0 and a -2, it takes only a few minutes to figure out the right size cam gear for any crankcase. All you have to do is install your gauge-cams in your crankcase and check their lash against your crank. Here's how to do it.

#### Check your gear lash

Install the crankshaft into the crankcase half, take your cam and roll the gears into mesh. Don't worry about the dots, you're just checking the lash, not assembling an engine.

With the crankcase open, use a pulley or crank on the nose of the crankshaft to smoothly rotate the crankshaft in its normal direction (ie, clockwise when facing the pulley). Do not allow any axial motion of the crankshaft during this test. Using a thrust hub is a good idea. Do several revolutions to insure the two shafts are properly bedded and the gears fully meshed. This test is normally done early in the assembly of the engine, before the connecting rods are mated to the crank.

Spec for cam gear mesh is 0.00 to 0.05 mm. The zero clearance reflects the fact that thermal expansion causes the two shafts to move farther apart at operating temperatures.

To check the mesh, hold the crankshaft stationary, rest your palm on the cam gear and rock it gently back & forth. One of three things is going to happen. You may not feel any motion at all, as if it were bedded in concrete. Or you'll feel a little motion, usually accompanied by a faint clink-clink as you rock it back & forth. Or you're going to feel a lot of motion, along with a loud CLUNK-CLUNK.

CLUNK is bad. You're using the wrong size cam gear; it's got too much clearance. Don't take my word for it, check it. Set up your dial indicator to rest on the bottom-most tooth, right next to the parting line of the crankcase. Use a pointed pallet on your dial indicator and set it up to bear on the corner of the gear tooth. Now rock the cam gear back and forth like you did before. (Remember to keep the crank from moving.) If you see more than point oh five mil of movement, you need a larger gear.

If you felt some motion but not enough to give you a clink, the lash is probably okay. But it's smart to check it out. Set up a dial indicator and measure the lash.

If you didn't feel any motion the lash may be okay. Or it may be too tight. Try rotating the crankshaft backwards. Here again, do not allow any axial motion of the crankshaft during this test – keep it pressed firmly against the thrust face of the #1 bearing. The handy way to do this is to make yourself a thrust hub. That's a fancy name for a junked flywheel, cut down to about 15 cm. The unhandy way is to use hand pressure. Of course, when you get to dialing in the cam you'll need to grow a third hand.



If reversing the crankshaft lifts the cam out of its bearings, the gears are jamming, the mesh is too tight. You need a smaller cam gear. But if it rotates smoothly and the cam stays in its bearings, you're okay.

When gauging your case you start with a 0 (zero) gear. Too tight? Then try your -2. If that's too loose, you need a -1. Too tight, you need a -3. (Only 13 engines out of 10,000 use a -4.)

The same procedure works the other way. If the 0 is too loose you go up two sizes.

In fully half the engines you'll build it takes only two trials to nail down which size you need. That's because over 95% of all VW engines use a cam gear between a +2 and a -2... A majority of new cases, about 65%, use a +1, 0, or -1. After being align-bored a case may need to go up one size but a +3 case is uncommon, +4 rarer than lips on a chicken. There's no mystery to any of this, it's simple statistics.

#### Finding a gear that fits

For the engine builder without a drawer full of spare cams, finding a gear that fits can be a conundrum. Here's why. Let's assume you have a gear on your cam. You check the lash using the procedure above and discover you've got either too much clearance or not enough. You need to buy a new gear. But with only one gears-worth of data, you can't say which size you need. Like all conundrums the gear size question has no satisfactory answer.

What to do? Best bet is to get your case gauged by somebody who knows what they're doing. If there's a good VW engine man in your area and you show up with a clean case, the driver on the crank and all the bearings properly fitted, he may be willing to gauge the crankcase for you. It can be done on the bench; no need for the engine fixture. And it doesn't take long, if he's got the right tools, or even if he's got known-good stock gears to use as gauges. But if you show up with just a box of unblueprinted parts, forget it. There's at least a couple hours labour to get a batch of raw parts to the point where you can accurately gauge the fit of the cam gear.

#### **Precision guesswork**

If you can't gauge your crankcase, get your hands on any cam gear of known size. Do the lash check and use your one cam's-worth of data to approximate a better fit. Follow me through, here. This isn't as crazy as it sounds.

Cam gear size reflects a Gaussian distribution curve. Statistically that means 95.44% of all stock engines used a cam gear between +2 and -2. We also know that a little bit too much clearance is better than not enough. Armed with that information, let's play the odds.

Let's say the cam gear you have jams. That sez you need a smaller gear. Read the number on the gear. If it is +2, +3 or +4, find yourself a 0 (zero). If it is a +1 or 0 (zero), go find a -1. If it is a -1 or -2, go find either a -3 or -4. If it is a -3, ignore it; the mismatch should be no more than 1/100mm. If your cam gear is a -4 and it is jammed, your crankcase has been improperly align bored because there aren't any more sizes left. I've heard there are actually eleven sizes of cam gear, +5 through -5, but I've never seen a 5 and can't say they actually exist.

Now let's look at the possibility your cam gear has too much lash. This is an easier problem to solve because we have more data. The fact it is too loose tells us we need a larger gear. By measuring the amount of that looseness – the excess lash – we can estimate what size will be a better fit.

First off, expand your acceptance spec to 0.1 mm. If your gear measures less than 0.1 mm lash, go ahead and use it. It's sloppy but it'll run. If it measures 0.1 to 0.2, go up two sizes. If more than 0.2 mm, go up three sizes.

You can't build a good engine with guess work but an educated guess, making full use of what information you have is better than pretending your gear lash doesn't matter.

When you know what size gear you need, give Clyde Berg a call, see if he can help you out. His dad used to keep a pretty good stock of different size gears on hand for his cam customers. Or do like I do and head for the junkyard. Because the cam runs at half the speed of the crank, the cam may be junk but the gear is usually well within spec. Simply drill out the rivets, throw away the cam and you've got yourself a usable gear.

#### How not to save money

To keep down the cost a lot of guys use a reground cam. Not one of the good ones, the other kind, with the gear already attached. You know the ones I mean, you've seen them at swap meets and in the J. C. Whitney catalog.

Such a cam is not a good choice because its gear is probably the wrong size for your engine.

Since you may need any one of nine different gears, most cam grinders ship their wiggle sticks without any gear at all. The flange is drilled & tapped (usually for M8x1.0) to accept cap screws. As the Mechanic-in-Charge it's your responsibility to install the proper gear. But nowadays the trick is finding the proper gear.

#### One size fits all - NOT!

So you buy a hot cam for your dream machine. Now you need a cam gear. You drop by the local VW store and sure enough, there's a batch of cam gears hanging on the wall.

Odds are, they won't fit either.

In preparing this article I examined more than thirty after-market gears obtained from a number of retailers here in southern California. Most of the gears were from Taiwan, some from Germany. All of the after-market cam gears I examined were not marked as to size. Of the Taiwanese gears I checked, all were about a +3. This may be an example of Oriental humour since a +3 is too big for 98% of all crankcases.

To find out what size they are you have to set them up in an engine and compare their lash to gears of known size or measure their diametrical pitch. But unless you want to tool up for it and do them in batches, it's impossible to justify the time it takes to determine the size of an unmarked gear, so long as gears of known size, even used ones, are available at junkyard prices.

The people selling those oversized, unmarked gears worked pretty hard to convince me gear lash is no big deal. I was told that after-market gears only come in one size because it's made of cast aluminium, much softer stuff than the magnesium alloy used for stock gears, and will wear itself in.

I got the same story at different places, often delivered in a scornful tone of voice. Oversize gears wear themselves in. Everyone knows that. So what about undersize gears? They don't matter, according to a clerk about twenty years old who claimed to have run one for the last five years (!) in his 250 hp daily driver. Gives him more power, he sez.

Sure it does. (Can I get fries with that?) Allow me to offer a bit of advice based on more than



forty years of VW engine building experience. What an oversized gear does is wear itself out and quickly, too, along with your engine. The first time you fire it up, jammed against the steel driver gear the softer aluminium wears at a furious rate, generating spoonfuls of metal flakes to contaminate your bearings. That's where most of that non-magnetic metallic sludge comes from in lo-buck rebuilds. By the time the engine reaches its normal operating temperature and thermal expansion draws the gears apart, it's too late, the thing will be worn beyond spec.

You're the Mechanic-in-Charge. Deciding which gear to use is up to you. But before you buy in to the one-size-fitsall philosophy, keep in mind that philosophy is saying Volkswagen, with nine sizes of cam gear in more than twentytwo million engines, was wrong. Personally, I found most after-market cam gears to be shoddy goods due to their poor fit with the camshaft flange. Notable exceptions were gears of German manufacture, which usually come drilled only for 6mm rivets. (Old stuff. Box said 'W. Germany.') They were a uniformly tight fit on the flange of the camshaft and although unmarked, ran about +1 in size. Opening up and tapping the rivet holes to accept cap screws is a simple task.

If gauging the case says that a +3 is just the size you need, one of those cast aluminium jobbies from Taiwan may be justified. But a word of caution: Take your cam with you and do a trial fit before you buy. The flange of the camshaft must fit tightly into the socket on the cam gear. The fit of the flange to the socket is what provides axial alignment between the camshaft and its gear. Although it's rather hard to believe, most of the after-market gears I've examined simply did not fit, the spigot was too large, too small or the bolting holes were misaligned.

Once your cam has been blessed with a gear that fits we can determine the indexing error between the cam and the crank. To do that we'll do a partial assembly of the engine and set up our degree wheel. But first we need to find TDC.

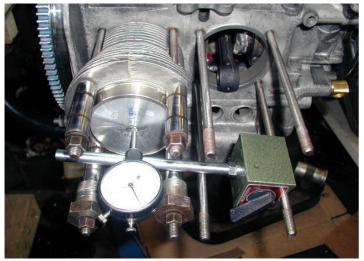
#### Where is TDC?

One Tuesday afternoon in 1873 Nicholas Otto invented the four stroke engine. On Thursday he dropped his TDC, it rolled under a bench and got lost. Mechanics have been looking for TDC ever since.

All piston engines have a TDC but there's two Top Dead Centres in the Otto cycle and two ways of defining it. The TDC we're interested in is the one on the compression stroke (the other is on the exhaust stroke). When setting the compression ratio or adjusting volumetric balance we define TDC in terms of deck height. But for cam timing, TDC is defined in terms of crankshaft rotation. Any way you cut it, before you dial in your cam you gotta find your TDC. So let's do that.

At this point I'll assume you're using a cam gear having the proper mesh, the cam bearings are fully bedded in their saddles and the cam's end-float is within spec. I'll also assume you've correctly set your crankshaft end-play and are using a thrust hub.

In the following procedure when I mention rotating the crankshaft, always turn it in the normal (ie, clockwise) direction unless told to do otherwise. The angle of the cam gear teeth combined with the end-float of the two shafts generates a surprising amount of slop any time the direction of rotation is reversed. When you need to back up and try



again, always go back at least a quarter turn of the crankshaft. This insures you've taken up the slop. When asked to rotate the crankshaft to a specific point, do so with a smooth continuous motion. Don't jiggle the thing back & forth. Jiggling about introduces slop into your readings and you'll never get the same numbers twice in a row.

Install a pair of modified cam followers on the #1 cylinder. Install the #1 connecting rod and torque the cap to spec. Close the case, install the six large (M12) nuts with washers and torque to 24 ft-lbs in a 'W' pattern, checking for free rotation of the crankshaft as the torquing progresses. When torqued to spec the crank should turn freely with finger pressure. Install the #1 piston, without rings, onto the #1 con rod. Inspect the cylinder sealing surface on the case and cylinders then install the head studs. Install #1 & #2 cylinder barrels with their spacers, if any. Install the deck plate, washers, spacers and nuts (See Tools You Can Make) then torque to spec for your particular studs (ie, M8 = 18 ft-lb, M10 = 30 ft-lb).

#### TDC - Dial Indicator method

Once the deck plate is in position you may install your dial indicator, timing wheel and timing wheel pointer. (See Tools You Can Make.)

The markings on your timing wheel will put you in the vicinity of TDC and your dial indicator will tell you when you've arrived. Use the lifters to identify which TDC you're on. At TDC on the compression stroke both of your valves will be closed, meaning the lifters will be down. Rock the crank through at least ninety degrees of arc at least half a dozen times to confirm the reading of your dial indicator. Once you're satisfied you've found TDC, position the degree wheel pointer precisely upon the TDC mark.

#### TDC - Stop-Bolt method

Finding TDC with a dial indicator works fine with most engines based on VW components but as the stroke increases so too does piston dwell at the point of reversal. If you've got good equipment – and young eyes – the dial indicator method will work for any engine although the probable error will increase with the stroke.

The stop-bolt method of determining TDC eliminates the dial indicator and any dwell-induced error. You insert a bolt in the torque plate so as to stop the upward travel of the piston just before it reaches TDC. You put a piece of masking tape or a white stickum on your degree wheel centred on the as-marked TDC and extending to either side. Rotate the crank until the piston is stopped by the bolt. Do this gently so as not to mar the top of the piston. Keeping tension on the crank, make a mark on the tape precisely aligned with whatever pointer you've rigged. Reverse the rotation of the crank until the piston again is stopped by the bolt. Make a second mark on the tape, again precisely aligned with your pointer.

TDC is exactly half-way between the two marks.

A lot of guys go astray by trying to use the stop-bolt method without marking their degree wheel. Instead, they record the stopped position in degrees, such as -3 going one direction and +4 going the other. Then they go crazy and subtract three from four and declare TDC to be at the +1 degree mark. Which is close but not nearly close enough. The correct answer is the difference divided by two, or half a degree.

To keep from going crazy, when using the stop-bolt method ignore the degree wheel markings. Make your own marks, measure the distance between them and divide it by two. The result is TDC with an accuracy of about half a degree.

#### Indexing the degree wheel.

The whole idea behind finding TDC is to index our degree wheel. The reason we need to index the wheel is because every engine is slightly different. When dialing in the cam we find TDC with as much precision as possible, move our pointer to align with the degree wheel's TDC mark and tighten it down. Some guys get confused on this issue because they think cam timing and ignition timing are the same thing or that TDC is represented by the centreline of the crankcase. The centreline is just a handy reference used in conjunction with the stock pulley to locate the approximate position of the static timing point for the ignition system. Ignition timing is akin to horseshoes, where close enough is usually good enough. Cam timing is the fixed relationship between the cam and the crank. With cam timing, you've either got it right or you lose.

Perhaps it would help resolve the parting line confusion if we started with a degree wheel that had no marks at all and covered up the parting line with tape. When the piston is at TDC so too is the degree wheel. You may position your pointer anywhere on the edge of the pulley, pencil in a mark and call it TDC. Or you may chose to put the degree marks on the engine and place the pointer on the wheel, which is what Volkswagen did with the Type 4 engine.



#### How to speak Camlobian

To dial in your cam you have to be able to read its specs; to understand a cam card. To do that you need to speak Camlobian.

At first glance Camlobian seems crazier than a hoot owl in heat. It is not. What's crazy is the description of the Otto cycle as taught in Auto Shop 101, where the two revolutions of the crankshaft are neatly divided into four distinct strokes during which the valves pop open and snap closed precisely (and instantly) at TDC and BDC. Real engines don't work like that. And never did. Those pretty pictures in all those text books are as phoney as Washington chopping down the cherry tree. Or cam gears that wear themselves in.

The fuel/air charge has mass and mass has inertia, as do all components in your valve train. It takes time and energy to overcome inertia. You must initiate the opening of a valve well before such opening is needed and start closing them well ahead of when it must be fully closed. That's why the intake valve in a real engine starts to open during the exhaust stroke and the exhaust valve opens rather early on in the

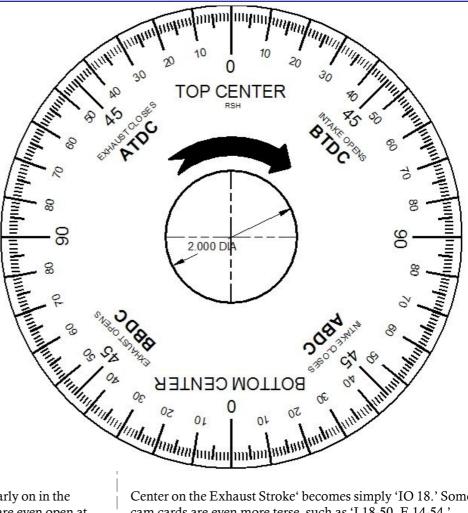
power stroke. At one point, the two valves are even open at the same time.

Camlobian reflects the reality of Otto cycle engines by ignoring the four strokes and focusing on intake and exhaust events. It does this by combining the 2:1 relationship between the crank and cam into quadrants of crankshaft rotation, during which particular intake and exhaust events normally occur. The quadrants are identified relative to Before (B) and After (A) Top Dead Centre (TDC) or Bottom Dead Center (BDC) and are named according; BTDC, ATDC, BBDC and ABDC. (Not to worry. I put all this poop on the degree wheel I've included with this article.)

What this form of notation does is convert each cam event into a logical data set, unique from every other. For example, the intake valve opens (IO) in the BTDC quadrant of the exhaust stroke. Since each quadrant represents 180° of cam rotation, so long as we're speaking of automotive Otto cycle engines a particular event will always occur in its particular quadrant. Having opened in the BTDC quadrant the intake valve must close (IC) at some point during the ABDC quadrant of the compression stroke. In a similar fashion, the exhaust opens (EO) during the BBDC quadrant of the power stroke which means it must close (EC) in the ATDC quadrant of the intake stroke. (And yes, there are some exceptions. Most occur with cams for supercharged engines, where you will occasionally see a quadrant number larger than 90 or less than zero. The basic definitions remain unchanged.)

Now comes the neat part.

Having established those conventions, speakers of camlobian needn't bother to mention either quadrant or stroke. 'The intake valves opens 18 degrees before Top Dead



Center on the Exhaust Stroke' becomes simply 'IO 18.' Some cam cards are even more terse, such as 'I 18-50, E 14-54,' wherein 18 is the opening point, 50 the close. Since by convention the intake valve is listed first, a cam's timing may even be defined by the ultra cryptic '18-50/14-54.'

Although Camlobian is a culturally rich tongue I've cited only a few basic phrases, enough for you to understand a cam card. For dialing in a cam, for each lobe, we're only interested in three of its many events. We want to know when it opens (O), when it closes (C) and when it peaks (P). To adjust our valve train geometry, normally done in conjunction with dialing in the cam, we also need the maximum lift and the half-height point but that will have to wait for another article. And perhaps another language.

#### .050" specs vs advertised specs

Because there are several ways to grind a cam and some marvellously ingenious methods of selling them, cam grinders have agreed to use the 0.050" (1.27 mm) lift point as a common standard for determining when various events occur. This is called the checking clearance.

You must read cam ads very carefully. The advertised specifications often use something other than the .050 checking clearance as their base point and may even refer to valve lift rather than cam lift, coyly neglecting to define rocker ratio. Such deceptive practices are used by some folks to sell stock sticks as full-race flame throwers.

Next month - Clocking the Cam and much more.

Bob Hoover



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