

# Zeitschrift



Kira, Lily and Bettina running the Club shop.

## June 2016

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**Plus lots more...**



**The Legend Never Dies**

## Club VeeDub Sydney.

[www.clubvw.org.au](http://www.clubvw.org.au)

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



# Club VeeDub Sydney Committee 2015-16.

<b>President:</b>	Steve Carter president@clubvw.org.au	0490 020 338
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<b>Raffle Officer:</b>	Christine Eaton	(02) 9520 4914
<b>Vintage Registr:</b>	John Ladomatos vintage@clubvw.org.au	0449 236 076
<b>VW Nationals Committee:</b>	David Birchall Craig Adams, Eddie Fleita	(02) 9534 4825
<b>Motorsport Captain:</b>	Rudi Frank motorsport@clubvw.org.au	0418 442 953

## VW Motorsport Committee:

John Ladomatos	Brian Walker
Craig Adams	Martha Adams
Conie Heliotis	Norm Robertson (JP)
Eddie Fleita	

## General Committee:

Martin Fox	Shirley Pleydon
Jeff Swords	Sue Monaghan
Craig Adams	Aaron Hawker

## Canberra Committee.

<b>Chair:</b>	Bruce Walker	chair@canberra.clubvw.org.au
<b>Vice-Chair:</b>	Rhiannon Walker	vicechair@canberra.clubvw.org.au
<b>Secretary:</b>	Rhiannon Walker	vicechair@canberra.clubvw.org.au
<b>Registrar:</b>	Iven Laufer	(02) 6254 1142
<b>Merchandise:</b>	Shari Walker	merchandise@canberra.clubvw.org.au

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

## 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 Arena Sports Club Ltd (Greyhound Club), 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  
PO Box 1340  
Camden NSW 2570

## Our magazine.

**Zeitschrift** (German for 'magazine') is published monthly by Club VeeDub Sydney Inc. 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.

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 (2007-on) are available at [www.clubvw.org.au](http://www.clubvw.org.au) under the Media - Zeitschrift tag.

Articles may be reproduced with an acknowledgment to *Zeitschrift, Club VeeDub Sydney.*

## We thank our VW Nationals sponsors:

### 29 VW Nationals.

Volkswagen Group Australia	Klaack Motors
Andrew Dodd Automotive	Stan Pobjoy Racing Engineering
C & S Automotive	Vintage Vee Dub Supplies
H&M Ferman	Volksbahn Autos Pty Ltd

### 25 years and over.

Shannons Car Insurance	Wolfsburg Motors St Peters
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### 20 years and over.

Aust VW Performance Ctre	Mick Motors
Indian Automotive	North Rocky & Import Parts

### 15 years and over.

Evolution Car Hire	Reliable Automotive Services
Harding Performance	Unicap Pty Ltd
Mobile Model Cars	Wayne Penrose VW Enginring
NRMA Insurance	

### 10 years and over.

All Metal Bumpers	Classic Vee Dub
Artemi's T-Shirts	Euro Automotive
Antique Tyres	Volksmuller
Black Needle Auto Upholstry	VW Classic Kirrawee
BWA Auto	VW Magazine Australia
Camden GTI Performance	Wolfsburg Auto Melbourne
Canberra VW Centre	VW Magazine Australia

### 5 years and over.

Custom T-Shirts	Mountain Mechanics
Expert Signs	Quik Strip Bankstown
Exoticars Service Centre	Rod Penrose Racing
Just Kampers	Subarugears
Motexion	Volkscare Melbourne
MacKellar Service Centre	Westside Mufflers

# THE AUSTRALIANA PIONEER VILLAGE



ROSE STREET, WILBERFORCE

(Behind the Heritage Hotel/Motel)

Ph 02 4575 1777 / 0438 751 775

[www.theapv.org.au](http://www.theapv.org.au)

## JEFF'S VW CRUISE TO WILBERFORCE

SUNDAY 26 JUNE 2016

Meet at **Gloria Jean's Coffee** at **Bella Vista** (corner Lexington Drive & Meridian Place) from **9:30am**

Cruise at **10:30am** to Australiana Pioneer Village, Rose Street, Wilberforce. Free parking inside.

\$5 entry fee for adults and \$3 for kids

\* Optional: Go-kart racing at nearby Indy 800 track. \$5 licence and \$30 for 10 minutes.

Call Jeff on 0402 280 242 for more information





# Bugs and Buses by the Bay

## Sun 3rd July 2016

Location: Croudace Bay Park on the sunny shores of beautiful Lake Macquarie NSW

Time: any time after 10am for lunch



all Volkswagens are welcome !

Bugs, Buses, Buggies and all others types of Volkswagens old & new even if you don't have a Volkswagen and just want to come along.

So get your VWs out and your picnic basket and come along for a day out with some Volkswagen friends.

There's BBQs in the park as well as a skate park & play ground for the kids.

It's also a dog friendly park.

# EURO MOTORFEST



**MG CAR CLUB HUNTER REGION**  
**LAMBTON PARK, ELDER STREET, LAMBTON**

*Let's try again*

**Sunday 10<sup>th</sup> July 2016 – from 8:00am**

Display Vehicle entry fee \$10.00 – Spectators FREE

Further information: [www.huntermg.com](http://www.huntermg.com)

Donation to Charity

**Another full week in 2016!**

**Volkswagen  
& Porsche  
Spectacular**

**VALLA**

**24th July  
to 1st August  
2016**

phone: 0427 695 203

**f**: [volkswagenspectacular](https://www.facebook.com/volkswagenspectacular)

email: [vwspectacular@gmail.com](mailto:vwspectacular@gmail.com)

[www.volkswagenspectacular.com](http://www.volkswagenspectacular.com)



# Council of Motor Clubs Presents

## The Shannons Sydney Classic

**Sunday 14th August 2016**

**Gates open to the Public at 10am**

Over 1900 Veteran & Classic vehicles from over 150 clubs on display and on parade, including cars, motorbikes, scooters and military vehicles, police vehicles, ambulances & fire engines. AND it's on rain, hail or shine. There's plenty to see and do indoors.

- Double-decker bus rides around the track (gold coin donation for the Bus Museum)
- Trade displays in Pit Garages all day with books, models & all sorts of memorabilia available for sale.
- Live music, the Free Spirit Markets, Rock 'N' Roll dancing, art show and much, much more !!
- Don't forget, this is very close to Father's Day, so come along and pick up a gift that Dad will love!

It's a day for all the family with lots of things for Dad, Mum & not forgetting the kids with clowns, ; face painting and lots more.

**General admission \$20**

**Free entry for kids under 12 years  
& Free Parking**



Find us on  
Facebook



**Sydney Motorsport Park,  
at Eastern Creek**



Canley Heights RSL & Sporting Club

Presents the 16th Annual

# Car Show

## Sunday 11<sup>th</sup> of September 2016



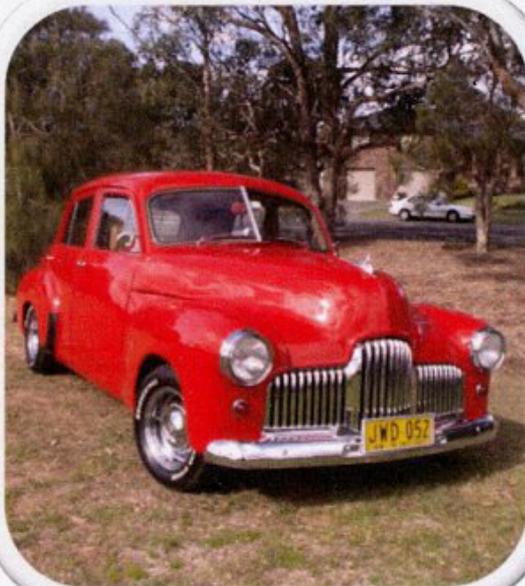
**Show Cars arrival time:** 6:45 – 8:45 am

**Start Time:** 9.00 am

**Car Entry Fee:** \$20.00

**Admission/Spectator Fee:** Gold Coin Donation

All Car Clubs welcome - Vintage, Classic,  
Custom, Hot Rod and Commercials



**Presentation / Trophies**

**from 2.00 pm**

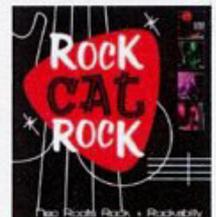
**Car Show Music by**

**DJ Town Sounds**

Entertainment in the Wakeley Room  
from 11:30am -

Featuring:

**ROCK  
CATROCK**



**Sausage Sizzle Hosted by  
Westfields Sports High School**

*Proceeds Donated to*

**Westfield's Sports  
High School**

**Enquiries call**

**Frank on:**

**9725-4329 or**

**0409 984 455**

**Canley Heights RSL & Sporting Club**

**Supporting the Community!**



Canley Heights RSL & Sporting Club

26 Humphries Rd, Wakeley, 2176

Ph: 9604-9975

W: [www.canleyheightsrsl.com.au](http://www.canleyheightsrsl.com.au)



## Von dem Herrn Präsident.

Well the 29th VW Nationals have come and gone, and again our biggest VW show of the year was very well attended. The VW Nationals and the club itself could not exist without from our club members and the club committee. We needed help leading up to the Nationals, during the day and after a long day at the show packing up the venue, so a big thanks you to you all. The show wouldn't have been a success without your help.

Again the Supersprint was held in Sydney, at Sydney Motorsport Park at Eastern Creek. Thank you to Dave Birchall for organising this venue again. Many of us are glad that we're not making the trek to Wakefield Park and back over the weekend.

The Supersprint was well attended, with competitor numbers increasing again to a full field of 80 this year. Invitations to members of other CAMS clubs were sent out, so there were a few non-VWs running; even so, we had more VWs competing than non VWs. A lot of people came out to watch the action at the various vantage points around the track. David Birchall is already trying to organise the same venue for next year's supersprint, and if so hopefully we can get even more VWs competing.

Thank you to Chris Fraser for all your admin work with CAMS and in the office on the day; the day would have been impossible without you and it was good see Chris smiling during the day as apart from a few incidents went off really well. Chris even got a chance to do a few laps in his Polo. Thanks too to all the scrutineers, marshals and flaggies who made the day run smoothly. Norm Robertson and Sue Monaghan help out at various CAMS events throughout the year and this allows us to get return favours from clubs that he has helped out during the year. We have a very small group of club members who have been trained by CAMS to be officials on the day. They did a great job but we need more club members to get involved. Our club has over 450 members with only very few of them helping out at the Supersprint.

After the Supersprint it was off to Fairfield to get the venue setup for Sunday's show n shine - setting up signs, setting the layout, putting up tables, hanging banners, organising the club office and shop and all the other work getting the venue ready. It was really good not having to dash back from Wakefield Park at Goulburn after the Supersprint to do the setting up. Speaking of signs, did anybody notice the beautiful new metal signs that Zelco had made up?

Sunday saw cars and traders began arriving before dawn and soon it was a hive of activity. Almost all the traders were in place early, and we had several brand new VWs on display. This year we had Five Dock Volkswagen on site. They donated some great raffle prizes and also handed out the trophies at the end of the day. The swappers had a bit more space this year, and we noticed there were more water-cooled VWs in the show than ever. There were also numerous newly restored older VWs that hadn't been seen before.

Thank you to all the sponsors who for their continued support; the updated sponsor list appears on the back page of this magazine. Please support them, because they support us.



The show classes and peer judging were streamlined a bit this year, with the forms redesigned to be simpler and faster to fill out. The queues at the entry were long but the cars moved through a bit quicker than previous years. We had 213 entries in the car show this year. The two most popular categories were Beetle '58-67 Modified, and T1 Kombi up to 1967 Modified, both of which had 16 entries. T2 Kombi 1968-79 Standard had 15 entries; Rat Class had 13 entries; Beetle 1968-on had 12 entries. The Golf 3, and Golf 6, categories both had 9 entries. The ten most-popular classes were awarded a second-prize trophy as well as a first prize.

Altogether there were 56 Transporters, 53 Beetles, and 46 Golfs entered (not including Rats), the three most popular VW models. This year was the first time we had a separate Golf 7 category, and 4 of them were entered.

Reflecting the high quality of the entrants, there were 8 cars, across the different categories, that each received more than 20 votes in the peer judging. One Beetle and one Kombi both received 24 votes; one Scirocco received 23 votes. Altogether, 1,157 votes were cast in the Peer Judging, which our spreadsheet was able to tabulate easily thanks to Phil's custom Excel design and Lily's efficient keying in.

Peer judging doesn't require adding up the scores, but rather counting the instances of any given entrant number. Excel has a function for this, which proved perfect for the task. Phil and Lily did an excellent job and had the results ready in plenty of time.

There was only 1 Factory Offroad entry this year – a Type 181, and only 1 air-cooled Race Car (a drag VW). There was only 1 Polo and only 1 water-cooled Convertible. There were 2 Audis, but only 1 SEAT. There were no Skodas and no Standard Karmann Ghias entered this year, but we will still have these classes again next year.

This year we again had an additional Concours class, judged by two VW industry experts. There were 3 entrants this year. We also gave trophies for People's Choice – the most popular air- and water-cooled VWs overall – as well as VW Group car of the day, chosen by Jason from Five Dock Volkswagen, and the Ray Pleydon Award, chosen by Shirley.

Thank you to all the helpers on the main gate, and the traffic marshals, and the band of ladies, Gwen, Martha, Susan and Shirley, who handled the car show entry forms and

helped all the entrants come through as quickly and smoothly as possible. We also had valuable help at the gate from Graham Ingram, helping people put their cars on the correct class and John Ladomatos helping out as well.

This year Connie took photos of the entrants' cars as they came through the gate. She and Phil spent considerable time matching up the photos to the winners for the Powerpoint presentation, which was ready well before the 3pm presentation. Lily counted all the People's Choice tickets. Christine's raffles were as popular as always, and this year's designs for the shirts and jackets were well received. The club stand was busy all day. Thank you to Raymond and Grace, Kira, Bettina and Lily for helping in the shop all day.

Parramatta Rotary again did a great job with the BBQ lunch, and Joe had arranged for country yodeller Johanna Hamara to entertain the crowd.

At 2:30 pm the crowd began gathering for the raffle draw. Matt White and Christine drew the raffle for the Camden GTI Golf giveaway. Then at 3pm Jason from Five Dock Volkswagen and I presented the trophies to the winners, with Phil doing the microphone work. It all went well, but six of the trophy winners weren't around to collect them.

Once again, thank you to all our members who helped out with the Nationals, both at Sydney Motorsport Park on Saturday and at Fairfield on Saturday night and Sunday. It made the setting up, running of the show and the packing up afterwards so much easier. A huge thank you to everyone, and especially to Dave Birchall. We were all worn out at the end of the day. I think the golf buggy really saved our aging legs on the day. We are open to all input from our members, both at the Committee and Monthly Club meetings, on the Nationals this year. What you liked, what you didn't and how we can make it even better next year.

Don't be shy, let us know what you think. So if you have some great ideas, please come along. Or drop us an email or leave a message on the Club website.

See you with your VW soon,

Steve Carter



## Kanberra Kapitel report.

Winter is officially here. The Canberrans had a very busy May with a number of events. We started the month with the VW Drive for the Community, which is a charity VW event supporting the Canberra Hospital. On 15 May we had the Shannons Wheels carshow (moved from March) with a good turnout of club cars on display with all other makes and models. We should have event reports and photos of these in next month's magazine. Then late in the month there was the VW Nationals, with quite a number of ACT club cars on display at the show, and everyone enjoying the event.

A big thanks to Willie, who organised events this month for us, and to the committee in Sydney for another great VW Nationals event.

We are having a break over June due to the hectic May schedule. In July we are planning a cruise to Murrumbateman, and then on 21 August David is organising a trip to Batemans Bay and the Corrigans Beach Rotary Markets. More info to come on these events.

Don't forget 18 September is our annual German Auto Display, mark the date down and we'd love to see you all there.

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](http://www.clubvw.org.au) for the latest information and any changes.**

### June.

**Thursday 2nd:- Magazine Cut-off Date** for articles, letters and For-Sales.

**Thursday 9th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

**Thursday 16th:- 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 26th:- Jeff's VW Cruise to Wilberforce.** Meet at Gloria Jeans Coffee, corner Lexington Dr & Meridian Place at Bella Vista, at 10am for coffees. Cruise at 10:30am up Windsor Rd to the historic Australiana Village at Wilberforce (\$5 adult, \$3 child entry). Free parking in the village. See the Heritage-listed 28-acre open-air museum preserving our past. Later those interested can try go-kart racing at the nearby Indy 800 Kart Track (\$30 10 min). Phone Jeff on 0402 280242 for more info.

**Monday 27th:- Canberra General Meeting** at the Harmonie German Club, 49 Jerrabomberra Avenue, Narrabundah, at 7:30pm.

### July.

**Sunday 3rd:- Bugs and Buses by the Bay 2016**, at Croudace Bay Park (Belmont), on the sunny shores of Lake Macquarie. All Volkswagens are welcome - Bugs, Buses, Buggies and all other old and new VWs that don't start with 'B'. BBQs and shelters for cooking, or bring your own picnic for a day out with your VW friends. Nearby kids playground and skate park, and it's pet-friendly too. Contact Rose and Ian on 0427 550203 or email [avwnut@bigpond.com](mailto:avwnut@bigpond.com) for more info.

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

**Sunday 10th:- Euro Motorfest 2016**, at Lambton Park, Elder St Lambton (Newcastle). Hosted by the MG Car Club (Hunter Region). All European makes (especially Volkswagens) invited. From 8:00am. \$10 entry for show cars, spectators free. For more info contact [www.huntermg.com](http://www.huntermg.com)

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

**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 Harmonie German Club, 49 Jerrabomberra Avenue, Narrabundah, at 7:30pm.

**Saturday 30th – Sunday 31st:- VW Spectacular 2016** at Valla Park, Nambucca Heads. These are the main activity days but events are on the whole week before. Local VW cruises and tours; go-kart racing. Saturday street parade at Nambucca Heads; racing at Raleigh Raceway; Fund-raising charity dinner and auction. Sunday car show with Top 10 Shootout, swap meet, traders. VW stuff all week. Pre-bookings and deposit are a must. Contact Donna Pell on 0427 695 203, or email [vwspectacular@gmail.com](mailto:vwspectacular@gmail.com). Visit the website [www.volkswagenspectacular.com](http://www.volkswagenspectacular.com) for more info and the **essential** booking form.

## August.

**Thursday 4th:- Magazine Cut-off Date** for articles, letters and For-Sales.

**Thursday 11th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

**Thursday 18th:- 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 21st: Shannons Sydney Classic 2015** at Sydney Motorsport Park, Eastern Creek. Organised by the CMC, it's the largest classic car show in Australia. Double-decker bus rides, trade stands, historic race cars, Concours, parade lap of the track. Club VW will again have a Volkswagen display. You must book with David Birchall at the monthly meeting or on (02) 9534 4825 to gain an entry/display ticket. This year we are celebrating 50 years of the 1300 Beetle and 40 years of the VW Golf in Australia.

**Monday 29th:- Canberra General Meeting** at the Harmonie German Club, 49 Jerrabomberra Avenue, Narrabundah, at 7:30pm.

## September.

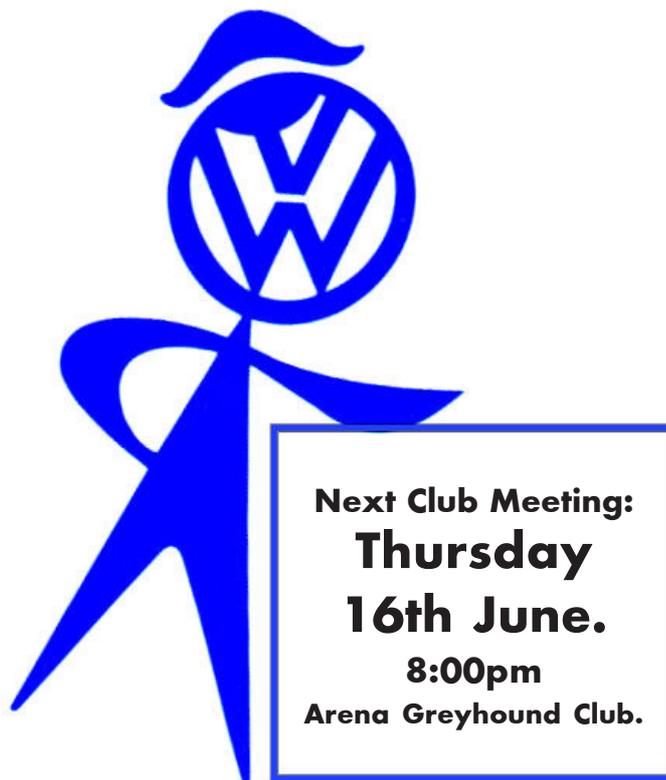
**Thursday 1st:- Magazine Cut-off Date** for articles, letters and For-Sales.

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

**Sunday 11th:- 16th Annual Classic Car Show** at Canley Heights RSL Club, 26 Humphries Rd Wakeley. Show cars should arrive 6:30-8:45am (\$20 entry). Show opens 9:00am (Gold coin donation for spectators). Car show music by DJ Town Sounds. Sausage sizzle by Westfields Sports High School. RSL Club open all day. Trophies presented at 2pm. Phone the RSL Club on 9604 9975 for more info.

**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.

**Sunday 18th:- Burwood Spring Festival Classic Car Show** at Burwood Park, Burwood. The car show is part of the Spring Festival, with displays, stalls, food, rides and entertainment all day. Vintage, veteran and classic cars. Club Veedub will be having a Volkswagen display (\$10 entry). You must pre-book by 1 Sept to enter. Visit [www.burwoodfestival.com.au](http://www.burwoodfestival.com.au) or phone the Burwood SES on (02) 9745 1386 and say you are with the VW Club.



**Sunday 25th:- Sydney German Autofest 2016**, car show and family picnic, at Gough Whitlam Park, Bayview Ave Earlwood. Organised by the Mercedes-Benz Club of NSW. All German makes welcome. \$10 entry per car. Entrants to be in place by 9:30am. Food and drink stalls on site. Volkswagens old and new wanted - let's have more VWs than Mercs, BMWs or Porsches! Contact Nick Harris (Merc club) on 0408 228305 for more info.

**Monday 26th:- Canberra General Meeting** at the Harmonie German Club, 49 Jerrabomberra Avenue, Narrabundah, at 7:30pm.

## October.

**Thursday 6th:- Magazine Cut-off Date** for articles, letters and For-Sales.

**Thursday 13th:- Committee Meeting** at the Greyhound Social Club, 140 Rookwood Rd. Yagoona (next to Potts Park).

**Thursday 20th:- 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 31st:- Canberra General Meeting** at the Harmonie German Club, 49 Jerrabomberra Avenue, Narrabundah, at 7:30pm.

## Marktplatz.

*Marktplatz ads in Zeitschrift are free. All ads should be emailed to [editor@clubvw.org.au](mailto:editor@clubvw.org.au)*

*All ads will be published here for two months. All published ads will also appear on our club website, [www.clubvw.org.au](http://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.*

## New Ads.

**1973 Type 3 automatic Notchback.** Unfinished project, garaged since 1989. This was going to be a "luxury car" project, so has lots of modifications, including a custom-built dash and interior. Rust-free, all panels file-finished, but unfinished sliding sunroof. Engine is out of another Type 3, has T2 Kombi fuel injection conversion, 2074cc displacement. \$5000. Please email Rod at [rod.young@aphs.nsw.edu.au](mailto:rod.young@aphs.nsw.edu.au) for more info.

**Wanted: Golf GTI owners!** Edge Media Pty Ltd (publishers of VW's 'Das Auto' magazine) are conducting a social media campaign, inviting Golf GTI drivers past and present, to submit video footage they may have of them and their Golf GTI. This is for a video for Volkswagen to celebrate the release of the Golf GTI 40 Years anniversary edition, the



most powerful one yet.

Would you like to star in our fan-powered birthday tribute film? Our beloved Golf GTI is turning 40 and it's fitter and faster than ever. Send us your Golf GTI videos, pictures and stories and you could be part of our celebration of 40 years of performance.

Is your Golf GTI a piece of history that should star in our 40th birthday film? Maybe it was the car you and your old man worked on together. Maybe it got you to the church on time. Maybe you drove your first kid back from the hospital in it. We'd love to get your GTI videos, pictures and stories to help us create a very special 40th birthday film.

Your Golf GTI can be old or new, any one of the 7 different generations ('Mks'). And it really can be of anything. Your GTI on a track, reversing out of the driveway, the GTI with kids in the back, whatever.

Contact Paul Rodger, Managing Editor (Edge Media) on (02) 8962 2660 (BH), or mobile 0405 524 456, or email [golf40@edge.agency](mailto:golf40@edge.agency)

**For Sale:-** VW beach buggy (buggly). Body is off the chassis 1200 cc I'm the second owner haven't touched the motor turns over has vin plate on chassis . Asking Price \$3500 Contact Roger Daniel on 0400 802493 or email [rgr.daniell@gmail.com](mailto:rgr.daniell@gmail.com)

**For Sale:-** Hello! I am a fellow VW enthusiast and a proud owner of VW as well! My company manufacturers **car accessories** and have recently just released a new VW line and our very excited to do business with all VW lovers. We have some great stuff any car lover would enjoy. We also do custom key-chains, frames, hitch covers etc. We would love to do business with you so please let me know if you would like me to send a catalog your way. Thank you for your time. Kind Regards, Eiton Barker Webpage <http://licenseframe.espswebsite.com/> or email [Eiton@baronlfi.com](mailto:Eiton@baronlfi.com)

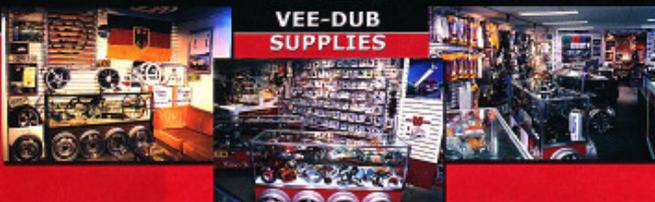
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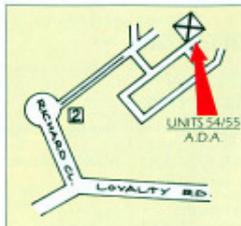
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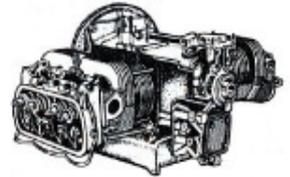
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## VW means 'premium peoples cars'.

Volkswagen Australia is still obviously chasing sales growth, but its focus is very much on offering products that it believes border on 'premium' territory while remaining relatively affordable.

Volkswagen Australia product marketing manager Jeff Shafer spoke to the press at the recent global launch of the new Tiguan in Berlin. He laid out how Volkswagen saw its positioning in the Australian market.



"We want to position our vehicle as premium, but for the people," he said. "If you buy an iPhone you don't pay the same as a HTC, but people understand the value.

"We're not talking about becoming a luxury brand or moving out of reach, but bringing premium attributes to a broader customer base".

His comments were made in the context of expected local pricing for the new Tiguan, which arrives in Australia this September. The new second-generation car is larger than before, and notably more sophisticated and tech-laden.

The optioned-up test vehicles for the launch had blind-spot monitoring, autonomous brakes, bird's-eye cameras, advanced off-road programming, self-parking, heads-up displays, Apple CarPlay/Android Auto and Audi-style digital TFT driver's instruments, to name just some features.

Of course, these features won't be standard. But Shafer did admit that the Tiguan would cost a little more than before, though we'd still expect an opening price of around \$30,000.

Volkswagen Australia already has a few advantages in seeking to be seen as a little upmarket. It has the cache of being European - Volkswagen has been Australia's most popular European brand for eleven years, since overtaking BMW and Mercedes in 2005. VW also offers a wide array of powertrains and sells a disproportionately high number of performance derivatives badged GTI, R or R-Line.

Whether the drive towards 'accessible premium' contradicts VW Australia's previous stated goal of being a top-five volume brand in Australia remains to be seen. VW is currently eighth, moving up from tenth in 2011 when it overtook Subaru and Honda. VW sales are 1.6 per cent lower in the first quarter of this year after a long period of growth and an all-time record sales figure last year of just over 60,000 vehicles.

However, just chasing sales growth isn't such a priority at present. Conversations with more senior management have made it clear that continuing to work on VW's still inadequate dealership network, after-sales service and parts functions (and tweaking its image), are just as, or perhaps more, important.

Volkswagen sales are slightly down this year, but this has little to do with the USA diesel engine emissions scandal (Australia does not do US-style tests). In fact, VW sales increased last year. Rather, it appears to reflect the market itself. Volkswagen is not strong in SUVs compared with other makes, and that's where all the market growth is going. The

Touareg is showing its age in spite of several upgrades, and the old Tiguan is in runout ahead of the new one. These are VW's only SUVs - even Audi has more SUV models, and outsells VW in this market segment.

Passenger car sales, where Volkswagen is strong (particularly in the Golf's small car segment), are well down, although this is at the small (Polo) and larger (Passat) ends of the market. VW has already withdrawn the low-selling Beetle, Up! and Golf Cabriolet from the market.

Volkswagen Australia is still getting up to speed with its new Caddy and T6 Transporter van ranges, which take time to build momentum. The Caddy is the market leader in its segment but the Transporter is yet to recapture the dominance of the VW Kombi of years gone by. The Amarok is

selling well but is due for a redesign soon.

## New Tiguan XL for Australia.

The forthcoming seven-seat Volkswagen Tiguan 'XL' derivative, due to launch globally in early 2017, looks certain for an eventual Australian launch.

The stretched Tiguan variant is expected to be about 110mm longer than the regular five-seat second-generation Volkswagen Tiguan due for launch here this September, and will greatly increase the breadth of VW's SUV range.

The Volkswagen Tiguan XL will effectively be a rival for relatively rare seven-seat mid-sized SUVs such as the Mitsubishi Outlander, and the more upmarket and extremely successful Land Rover Discovery Sport.



As we know (see last month's issue), Volkswagen is also developing a larger family SUV model, based on the CrossBlue concept, but this is likely to be focused more on the enormous US market. We don't even know yet whether the CrossBlue will be made in RHD.

Volkswagen Australia managing director Michael Bartsch confirmed that VW's local arm was "planning to have the seven-seat" version of the new Tiguan.

Volkswagen AG engineers in Berlin said making longer wheelbase and/or right-hand drive versions of the car would be "no problem", and said to expect a stretched body. This is the benefit of the modular MQB platform on which the new Tiguan — and a plethora of vehicles from VW, Skoda and Audi — is based.

Expect the seven-seater Tiguan to share powertrains and other features with the new Tiguan, led by a 162 kW/380 Nm 2.0 turbo-petrol and 140 kW/400 Nm 2.0 diesel, matched the DSG transmissions and 4Motion AWD. Features such as a digital TFT instrument display will also be offered.

The stretched seven-seat Tiguan XL will be made in VW's Puebla plant in Mexico, which also makes the Jetta, Golf Wagon and Beetle for world export. The regular five-seat Tiguan comes out of Germany.

Given our VW insiders suggest a Tiguan XL market launch overseas in early 2017, expecting an Australian launch from mid-late 2017 seems reasonable.

The Volkswagen Tiguan XL will be one member of a burgeoning Tiguan 'family', with a sportier crossover version also on the cards for a 2017/18 launch.

## No Tiguan R.

Sadly though, a VW Tiguan R, using the Golf R's 4Motion AWD system with Haldex clutch and Australian-tune 206 kW/380 Nm 2.0-litre turbo engine, won't be happening.

However, the new-generation Volkswagen Tiguan 2, just debuted in Berlin, will be available globally with the Golf GTI 162 kW/350 Nm turbo engine and 4Motion AWD system. Think of it as a GTI on stilts, costing around \$50,000.

This model will come to Australia when the range launches in September, and will be offered with VW's signature R-Line styling package.

The obvious question is if we might get a full-fat Tiguan R. However, after speaking to several Volkswagen product experts based in the Wolfsburg headquarters, it's clear that we shouldn't hold our breath.



One insider admitted VW had looked into it, but deemed it unsuitable. This means the 162TSI will be the global petrol performance leader for the new Tiguan.

In Europe the new Tiguan will be available with a BiTurbo diesel engine (also used in the Passat) making an impressive 176 kW/500 Nm. But, to add salt to our collective wounds, that one won't come to Australia.

VW Australia says the cost of developing an updated cooling system for hot climates such as ours (Golf/Scirocco R engines are detuned already) cannot be recouped by the 176TDI's projected local sales. So, no dice for our market, despite the strength of performance car sales here.

Volkswagen Group Australia product marketing manager Jeff Shafer admitted that the company's local arm would "love" to have included the 176TDI if the economics had worked out, but that was not to be.

## VW Australia wants more SUVs.

Volkswagen Australia admits its coverage of the booming SUV market lags behind key rivals, but is planning to make up lost ground in a hurry.

SUV sales are quite literally driving the Australian vehicle market to record growth, up 13.8 per cent and comprising 38 per cent of the market in 2016 — almost the same percentage as passenger vehicles, which are down 8 per cent.

But Volkswagen, Australia's number eight brand by overall sales, is a little thin in the SUV (and Crossover) department. Alongside the soon-to-be-replaced Tiguan, it only has the upmarket Touareg, plus the Golf and Passat Alltrack crossovers.

However, VW is being quite open about its "SUV product offensive", starting with the larger and more upmarket second-generation Tiguan, to be launched in Australia in September. Volkswagen is predicting much stronger sales, as many as 10,000 a year, though not the 1500-plus per month of the Mazda CX-5 and Nissan X-Trail.

Beyond this, Volkswagen will make a stretched seven-seat Tiguan derivative (confirmed for Australian launch, likely in 2017) and a sporty crossover 'coupe' style version in the style of the T-Roc concept, plus a smaller baby SUV to rival the Mazda CX-3, based on the next Polo's MQB and previewed by the T-Cross Breeze concept.

Volkswagen has also confirmed it will make a next-generation Touareg, though whether this uses the transverse engine MQB platform used on the Tiguan and Passat, or Audi's longitudinal MLB in a more upmarket move, is unclear. VW will also make a full-size family SUV for the North American market, previewed by the CrossBlue concept, but unlikely for Australia unless it can be made in RHD.

Volkswagen Australia managing director Michael Bartsch has acknowledged that VW's local arm fell short in the SUV race against the likes of Mazda, Mitsubishi and Hyundai.

"In terms of coverage we are lagging some key competition... we have ground to cover," he said, but added that the company's goal at this point was to get it right rather



than rush it. Expect the majority of these models bar the US full-size offering to arrive here over the next 2-3 years.

Australian new vehicle sales numbers demonstrate the way Volkswagen falls short in SUV sales. Volkswagen has a 7.8 per cent share of the passenger car market thanks to the Polo, Golf, Jetta and Passat, placing it fifth overall, but this market is shrinking. VW also owns 5.7 per cent of the light commercial market so far this year courtesy of the Caddy, Transporter, Crafter and Amarok.

But Volkswagen only has a 2 per cent share of the SUV market in 2016, compared to 13.4 per cent for Toyota, 10.3 per cent for Mazda and 9.9 per cent for Nissan. Even Audi has a higher market share (2.4 per cent).

## New Polo WRC sketch.

Volkswagen has teased its 2017 Polo R WRC rally car in a sketch, clearly stating the car maker's intentions of taking out another WRC season next year.



VW's new rally weapon has been in development since 2015 and will be more powerful than the current Polo WRC, after new FIA regulations allowed manufacturers to increase the car's 1.6-litre turbocharged engine by around 44 kW to a thumping 279 kW. This is comparable to the legendary Audi quattro, which won the WRC in 1982 with 275 kW (from 2.2 litres). Of course, the later Group B Audi quattro A2 and quattro Sport (1984 champion) had outputs from 330 kW right up to 440 kW for the ultimate quattro S1 in 1986, just before the Group B cars were outlawed.

In addition to the power upgrades, the Polo R WRC will be 50mm wider and 25 kilograms lighter than the current car, after the FIA loosened restrictions in an effort to reignite global interest in rally's premier league.

Visual changes include a larger rear wing and broader front splitter, another change courtesy of the greater freedom

granted by the revised FIA regulations. Under the revised rules, teams are also allowed to use an electronic centre differential for the power transmission of their rally car.

Volkswagen motorsport director, Jost Capito, said that the car will be "considerably more dynamic, whilst at the same time being safer."

"The 2017 regulations include many spectacular technical innovations for the World Rally Championship," he said.

"The key between now and the start of the next season is to achieve the best possible prerequisites to allow the 2017 Polo R WRC to be as successful as its predecessors."

VW entered the WRC for the first time (since the Audis) in 2013, after moving their successful rally program over from the Dakar. The Polo R WRC won the Championship in 2013, and again in 2014 and 2015. So far in 2016, the VW Polo R WRC has won the first 3 events and finished second in Rally Argentina, and is leading the Championship again.

From the sketch the Polo R WRC definitely looks the business, but we'll have to wait until next year to see if the changes are enough to snag Volkswagen another WRC title.

## Electric VWs here by 2020.

Volkswagen Australia is likely to offer electric and plug-in hybrid models here within the next few years, according to managing director Michael Bartsch.

VW is pushing ever more heavily into the development of EV (Electric Vehicle) and PHEV (Plug-in Hybrid Electric Vehicle) models globally, but as yet offers nothing along those lines for our market.

However, Bartsch said the rollout of green technologies was beneficial as a brand-builder, though VW is realistic about the low volumes it is likely to achieve with such cars.

"You have to start somewhere," Bartsch said, adding that it was "important for Volkswagen and other brands to show real leadership".

When asked if we could expect Volkswagen EV and PHEV models in Australian showrooms by 2020, Bartsch said it was "a fair assessment". Expect the two drivetrain types to launch almost simultaneously.

Bartsch acknowledged that the lack of infrastructure and high prices would scare off buyers without the money and



desire to make a “major statement”, and said low fuel prices may also play a role in deterring those more motivated by potential savings.

“It’s a long line to mainstream,” he said.

Vehicle electrification is hardly abundant in Australia, but brands present in that space are seeing other forms of success. Tesla has the cachet most brands would kill for, and BMW is seeing strong success from its low-volume, high-yield i3 and i8 models.

Volkswagen globally has huge electrification plans, though the day where electrified cars become the mainstream choice is a long way away. Critical mass leading to scale is the key. But brand image depends on being seen as green.

Former Volkswagen Group chief Martin Winterkorn late last year reaffirmed the Group’s pledge to make 20 EVs and plug-in hybrids by 2020 (including subsidiary brands Porsche and Audi) and then turn all its cars into veritable “smartphones on wheels” by the end of the decade. He called it the “reinvention of Volkswagen.”

Just like its MQB modular platform that underpins most of its volume models — Golf, Passat and Tiguan — Volkswagen will roll out a suite of cars using the MEB modular electric kit.

In Europe, with its considerable EV recharging infrastructure backed by clean nuclear power generation (especially in France), Volkswagen already offers electric models such as the e-Up and e-Golf, and will soon expand this with cars spun off the new MEB, as previewed this year with the Budd-E van concept. VW also has plug-in hybrids such as the Golf GTE, Passat GTE and Tiguan GTE.

## New Amarok testing in Sweden.

The 2017 Volkswagen Amarok has been snapped while testing on the snow-covered roads of Sweden, pointing at the coming facelift.

Unlike some previous spy photos, these new images captured both the single- and dual-cab versions of the Amarok being put through their paces.

With heavy camouflage still fixed to its nose, we can expect to see a refreshed face when the updated Amarok launches. That should include a new front bumper, grille and subtly revised headlights.

Reports also indicate that the interior has had some slight alterations with a new infotainment system featuring



Apple CarPlay, Android Auto and an updated trim to stay ahead of the newly impressive Ford Ranger interior makeover.

It’s unclear whether there have been any tweaks to the Amarok’s powertrain offerings, however, changes would likely be minimal.

The current-gen Amarok offers several levels of tune for its 2.0-litre biturbo-diesel engine, giving buyers a choice of a 103 kW/340 Nm, 132 kW/400 Nm or 132 kW/420 Nm outputs. Unfortunately, there is no indication that VW will be offering the V6 TDI (180 kW/550 Nm) from the Touareg, although this has been much requested by buyers. Even more so, the Touareg’s V8 TDI (250 kW/800 Nm) remains a dream.

A six-speed manual and eight-speed automatic transmissions are currently offered, as well as two- or four-wheel-drive configurations.

The Amarok is Volkswagen’s third-top-selling vehicle in Australia behind the Golf and Polo, and is VW’s answer to class-leading utes in the Toyota Hilux, Nissan Navara and Ford Ranger.

Some 175,000 cars make up Australia’s strong ute market, with Volkswagen owning a five per cent share of that. Within the next few years, Volkswagen will have to contend with the likes of Renault, Mercedes-Benz and PSA Peugeot Citroen moving on plans to enter the competition.

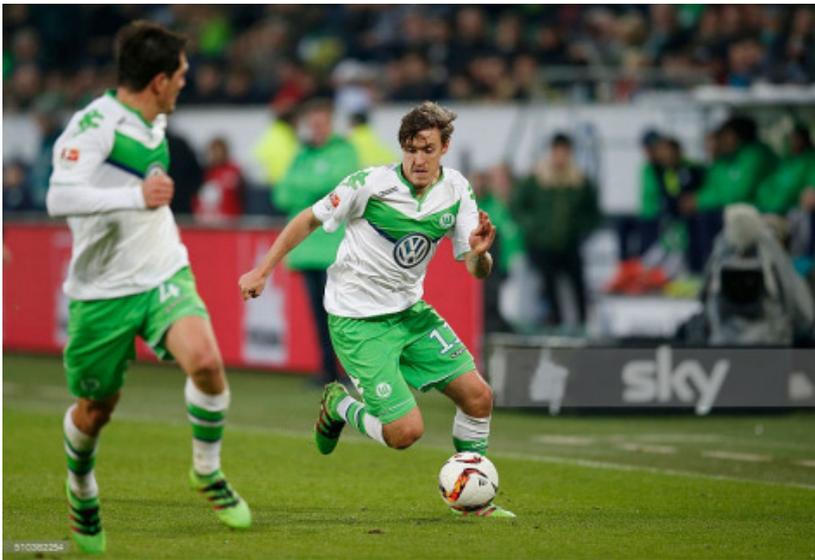
The next-generation Amarok is expected to make its international debut in July, with an Australian launch likely for later in the year.

## VfL Wolfsburg finishes 8th.

The 2015-16 season of the Bundesliga, the premier German professional football (soccer) competition, has just completed. It was the 53rd season for the Bundesliga, which has the highest average attendance (45,100 per match) of any soccer competition in the world – even more than the English Premier League. Our team, the VfL Wolfsburg ‘Wolves’, have played in the top division since 1998 and have won the Premiership just once – in 2008-09. The Wolves are owned by Volkswagen AG and they normally play in a green and white strip, with a large blue Volkswagen logo. VfL stands for ‘Verein für Leibesübungen’, or ‘Club for Exercises’ (sports club, in other words).

Last season, in 2014-15, the Wolves had a great year and finished second overall behind the premiers, Bayern Munich. This qualified them for the group stage of the UEFA European Champions League last December, for just the second time in their history. The Wolves were in Group B, along with Manchester United (UK), CSKA Moscow (Russia) and PSV Eindhoven (Netherlands). Each team played the others twice, at home and away. The Wolves won four of their six group matches and all three home matches, including beating Man-U 3-2 at Wolfsburg. They topped their group and progressed to the knockout stage.

In February the knockout stage began, featuring the best 16 qualifying teams from all the European premier league competitions. The Wolves had never progressed this far before, even in their 2008-09 premiership year.



First up in the round of 16, the Wolves faced K.A.A Gent (Belgium), and won 3-2 and 1-0. This put the Wolves into the Quarter Finals in March, for the first time ever. Here they came up against the famous Real Madrid club (Spain). The Wolves beat them 2-0 in front of a sell-out crowd at Volkswagen Arena in Wolfsburg on a great day. However, at the return leg in Madrid, the Wolves lost 3-0 and were eliminated on aggregate (2-3). The powerful Real Madrid club then went on to eliminate Manchester City in the Semi Final. The Final was an all-Spanish game between Real Madrid and Atletico Madrid (who unexpectedly eliminated German giants Bayern Munich).

Meanwhile the 2015-16 Bundesliga got underway last August. There are 18 teams in the Bundesliga, so with home and away matches against every team there are 34 rounds in the season (rugby league take note).

The Wolves started the season well, and were in third place up to the Christmas-New Year break. Some of the Wolves' best home wins included 2-0 defeats of Hertha BSC and FC Ingolstadt; a 3-1 defeat of Stuttgart; a 4-2 victory over Hoffenheim; a 3-0 defeat of FC Schalke and a remarkable 6-0 flogging of Werder Bremen. The Wolves managed to win 9 of their 17 home matches, drawing 5 and losing just 3 (the worst of these were 0-2 defeats by FC Augsburg and Bayern Munich.)

The problem for the Wolves in 2015-16 was their away performances. The Wolves won just 3 away matches – 1-0 against Darmstadt and Hamburger SV, and a superb 4-0 defeat of Hannover, where Wolves shooter André Schürrle scored a hat-trick of goals. They drew 4 away matches, but lost 10 of them. They were twice defeated 1-5, by Borussia Dortmund and Bayern Munich, and they twice lost 0-3 (to Bayer Leverkusen and Schalke 04).

After a strong start to the season, the Wolves

dropped to fifth, then seventh, then eighth after several successive defeats. With three rounds to go the Wolves were languishing in tenth place, but managed to recover to eighth with wins over Hamburger SV and Stuttgart in the last two rounds. The Wolves missed out on advancing to any UEFA matches this year, as only the top seven teams qualify of the Champions and Europa leagues.

The Wolves played 34 matches, won 12, drew 9 and lost 13. They scored 47 goals for but 49 against, a goal difference of -2. The Wolves finished in 8th place, on 45 points. The 2015-16 premiers were the powerful Bayern Munich, for the 25th time and a record fourth year in a row. Bayern won 28 of 34 and finished with a goal difference of +63 in a dominating display.

The bottom two teams of the 2015-16 Bundesliga were VfB Stuttgart and Hannover. These two teams are relegated to the 'second division' competition, the 2 Bundesliga, for next year. The Mercedes-sponsored Stuttgart team is relegated for the first time since 1975-1977, while Hannover were previously in the lower division between 1974 and 2002.

These relegated teams will be replaced by the top two teams in the 2 Bundesliga for 2015-16, SC Freiburg and RB Leipzig. Freiburg traditionally goes up and down between the first and second competitions, and returns to the 1 Bundesliga after just one year in the lower division. RB Leipzig is a new franchise created by the Red Bull company from an old fifth division team (SSV Markrandstadt) in 2009, and has quickly worked its way up through four divisions in six years. They will play in the premier 1 Bundesliga for the first time next season.

Also, the third-bottom 1 Bundesliga team had to play off against the third-best 2-Bundesliga team for a place in the top division for next year. This year saw the third-bottom Eintracht Frankfurt play off against FC Nurnberg, who were demoted in 2014. The first match was a 1-1 draw, then Eintracht Frankfurt won 1-0 away, securing their place for another year.

The 2016-17 Bundesliga kicks off in August. Go the VfL Wolfsburg Wolves!



# VW Nation



# nals 2016





## 2016 VW Nationals Supersprint.

Club Vee Dub Sydney again staged a great weekend of two spectacles.

First our Supersprint at Eastern Creek on Saturday, followed up on Sunday with the VW Nationals car show. Both events are firmly entrenched in the Club calendar at two ideal venues.

Saturdays Supersprint had our officials on hand at 6am to commence the task of scrutineering cars that did not take advantage of the previous Saturday's chance to beat the queue. Thanks to Boris of Vintage Vee Dub Campsie opening his workshop to the Club on Saturday 14th and providing a BBQ lunch. Just where does Boris get those slim snags?

On race day the event had 80 entries providing a full field for this circuit and paying for the privilege of racing against the clock over 5 sessions during the day. Apart from minor failures the day went smoothly.

This year we again had a high number VW Group cars competing. Around 43 Beetles, Golfs, Sciroccos, Polos and even a SEAT and Porsche, VW Group cars made up just over half the field. The rest were all the other marques who help pay the bills.

Both air and water-cooled cars posted some fast and close times in their respective classes and sessions.

After lunch break, times are always good with drivers and cars enjoying a warmer track surface.

Checking the times from the day had Steve Muller posting both the fastest water-cooled VW time and fastest VW overall in his Golf R. Rudi Frank (Mr Reliability) posted the fastest air-cooled time, only a fraction of a second slower. See the result sheet to see how close the top cars were.

A number of Club members chanced their foot and pedal movement on the circuit.

Gail Tuckers first time on the circuit was slightly eventful with just one 'off' in the Porsche Boxster. Gail lost her mum in a car accident just 3 weeks before and Gail soldiered on all day. We were all supporting Gail for turning up and challenging herself.

The Club cannot thank Chris Fraser enough in preparing the Sub Regs for our event and grading cars and drivers. Chris ran the grid all day and is a stickler for not passing under a yellow flag.

We thank Chris' wife for lending him out to us on the day - she was celebrating her birthday.

We also thank the volunteers who turned out to lend a

hand to run this high cost Club event, which now turns a profit since our move from Goulburn to Sydney Motor Sport Park.

Our volunteers were: (take note where they come from)

Chris	Club VW and Wollongong Sporting Car Club
Thomas	WSCC
Barry	WSCC
Ian	WSCC
John	WSCC
Miki	WSCC
Derek	ARDC
Rod	ARDC
Sue	Club Vee Dub
Martha	Club Vee Dub
Conde	Club Vee Dub
Brian	Club Vee Dub
Norm I (Sec)	Club Vee Dub
Rudi	Club Vee Dub
John L	Club Vee Dub

As usual our club is under-represented in providing volunteers necessary to run this event. On our own we would not be able to man all posts, and paying competitors would be asked to go home with no refund if the event is called off. This circuit requires five posts to be manned minimum as the tower cannot see the back part of the circuit. Thank you to the WSCC and ARDC for their valuable helpers.

Thank you too to Conie for the photos.

It is time that club members recognize what a great spectacle the Supersprint put on by our CLUB is! A Jackman attitude is not why we join Club Vee Dub. We join to make the Club a success at ALL sanctioned events.

Report and Comments?

Norm Robertson



Club VW Supersprint (Nationals)  
Sydney Motorsport Park Amaroo

Qualifying S1  
Scheduled Start 00:01

Page 1 Issue 1  
Start Sat May 21 09:30  
Elapsed Time 07:10:54

Supersprint

Pos	Car	Driver	Competitor/Team	Vehicle	Cap	CL	Laps	Fastest...Lap	Gap
1	146	Peter Brown	Peter Brown	Clubman		5A	17	16 0:58.4300*	
2	99	David Isaacs	David Isaacs	Evo 5		3C	36	23 1:00.8880	0:02.4580
3	85	Kieran Wu	Kieran Wu	Nissan 350Z		2C	36	30 1:02.0060	0:03.5760
4	159	Stephen Muller	Stephen Muller	Golf R		4C	28	15 1:02.1110	0:03.6810
5	20	Leon Tu	Leon Tu	EVO 9		SVC	32	27 1:02.3940	0:03.9640
6	96	Rudi Frank	Rudi Frank	VW Beetle		4C	26	21 1:02.4260	0:03.9960
7	916	Scott Williams	Scott Williams	Silvia		2C	23	13 1:02.4740	0:04.0440
8	918	Kevin Ho	Kevin Ho	RTDC		2B	32	20 1:03.1450	0:04.7150
9	44	Marcus Lai	Marcus Lai	Evo 6		SVC	26	26 1:04.1270	0:05.6970
10	41	Ben Seehusen	Ben Seehusen	BMW M3		4C	18	16 1:04.1800	0:05.7500
11	141	David Seehusen	David Seehusen	BMW M3		4C	21	17 1:04.5760	0:06.1460
12	35	Xu Lin	Xu Lin	Skyline		SVD	33	29 1:04.7090	0:06.2790
13	11	Paul Muller	Paul Muller	Golf R		SVC	10	8 1:04.8210	0:06.3910
14	15	Dean Penrose	Dean Penrose	VW Beetle		4C	5	3 1:04.9520	0:06.5220
15	86	Kim Tai	Kim Tai	Toyota 86		2B	23	23 1:05.4280	0:06.9980
16	80	Hugo Chan	Hugo Chan	Golf Gti		2C	32	16 1:05.7620	0:07.3320
17	110	Mariano Loisso	Mariano Loisso	Lancer Evo		2C	30	24 1:06.0160	0:07.5860
18	618	Gary Dower	Gary Dower	Golf R		SVC	33	11 1:06.1770	0:07.7470
19	82	Arno Breutmann	Arno Breutmann	Golf		SVC	26	22 1:06.7790	0:08.3490
20	83	Hubert Chau	Hubert Chau	WRX		3C	33	22 1:06.9560	0:08.5260
21	117	Jason King	Jason King	120Y		4A	20	4 1:07.1010	0:08.6710
22	1	Paul Zanello	Paul Zanello	Buggy		SVC	26	22 1:07.3120	0:08.8820
23	974	Mathew Cameron	Mathew Cameron	Fabia		SVC	17	8 1:07.3580	0:08.9280
24	111	Aeron Napper	Aeron Napper	Commodore		3D	23	19 1:07.4480	0:09.0180
25	119	Mark Page	Mark Page	Skyline		3C	26	23 1:07.6410	0:09.2110
26	7	Jon Bates	Jon Bates	Golf R		2C	39	35 1:07.7030	0:09.2730
27	93	Ray Cripps	Ray Cripps	300ZX		3D	30	21 1:07.7100	0:09.2800
28	16	Jason Yu	Jason Yu	BMW 235i		SVD	31	22 1:08.0870	0:09.6570
29	51	Hugh McKinley	Hugh McKinley	W Beetle		SVC	14	6 1:08.2100	0:09.7800
30	39	Ron Madafiglio	Ron Madafiglio	BMW M3		2C	34	24 1:08.4130	0:09.9830
31	36	Zero Li	Zero Li	GOLF		2B	24	19 1:08.4930	0:10.0630
32	136	Man Ho Yu	Man Ho Yu	GOLF		2B	25	24 1:08.9510	0:10.5210
33	529	Luis Guevara	Luis Guevara	Beetle		4C	27	16 1:09.4390	0:11.0090
34	8	Jamie Hanson	Jamie Hanson	Scirocco		SVC	37	34 1:09.4630	0:11.0330
35	2	David Chenery	David Chenery	VW Golf		2C	30	25 1:09.6280	0:11.1980
36	91	Greg Mackie	Greg Mackie	VW Golf		1C	17	10 1:09.7930	0:11.3630
37	77	James Kelly	James Kelly	Ignis		2A	30	7 1:09.8400	0:11.4100
38	18	Azgar Khan	Azgar Khan	Megane		SVC	23	8 1:09.9570	0:11.5270
39	114	Jie Fu	Jie Fu	Scirocco		SVC	32	29 1:09.9600	0:11.5300
40	191	Stephan Bergner	Stephan Bergner	CRX		3A	36	35 1:10.0870	0:11.6570
41	88	Albert Ho	Albert Ho	Toyota 86		2B	39	30 1:10.1260	0:11.6960
42	33	Graham Perkiss	Graham Perkiss	MX5		2A	31	30 1:10.2280	0:11.7980
43	26	Billy Leung	Billy Leung	BMW		SVD	31	28 1:10.3010	0:11.8710
44	133	Jamie Clapham	Jamie Clapham	Beetle		SVB	28	20 1:10.3800	0:11.9500
45	171	Ayden Cowley	Ayden Cowley	Ibiza		2B	39	29 1:10.8350	0:12.4050
46	87	Matthew Wright	Matthew Wright	VW Golf		4B	23	19 1:11.3620	0:12.9320
47	23	Tom Ryke	Tom Ryke	Datsun		3A	33	30 1:11.6300	0:13.2000
48	28	Manuel Vassallo	Manuel Vassallo	Golf		2B	26	11 1:11.7830	0:13.3530
49	13	Peter Nagger	Peter Nagger	Golf R		SVC	25	24 1:11.8260	0:13.3960
50	71	David Cowley	David Cowley	Ibiza		2B	39	29 1:11.8370	0:13.4070
51	56	Paul Wright	Paul Wright	VW Golf		4B	25	21 1:11.9100	0:13.4800
52	106	Jak Rizzo	Jak Rizzo	VW Beetle		SVC	4	4 1:12.2300	0:13.8000
53	800	Caroline Ostowski	Caroline Ostowski	Polo		SVC	23	22 1:12.2730	0:13.8430
54	808	Matthew White	Matthew White	Polo		SVC	39	31 1:12.2890	0:13.8590
55	411	Kris Muller	Kris Muller	Golf R		1C	42	35 1:12.5970	0:14.1670
56	231	Danny Ryke	Danny Ryke	Datsun		3A	32	32 1:12.7820	0:14.3520
57	113	Chung King Wong	Chung King Wong	Honda S2000		1B	27	11 1:12.8230	0:14.3930
58	22	Craig Hughes	Craig Hughes	Golf		4B	32	17 1:13.1270	0:14.6970
59	34	Brad Woodhams	Brad Woodhams	Astra		3B	38	37 1:13.1810	0:14.7510
60	3	Grahame Rumballe	Grahame Rumballe	Golf		3B	38	34 1:13.3880	0:14.9580
61	10	Cheuk Wa Chan	Cheuk Wa Chan	Crown		SVD	23	21 1:13.6790	0:15.2490
62	417	Stephen Budd	Stephen Budd	Golf R		1C	33	23 1:13.6950	0:15.2650
63	4	Matthew Watson	Matthew Watson	Golf R32			29	21 1:13.9010	0:15.4710
64	14	George Geshos	George Geshos	VW Beetle		4C	30	24 1:14.0130	0:15.5830
65	31	David Carter	David Carter	VW Beetle		SVC	14	14 1:14.6990	0:16.2690
66	711	Chris Fraser	Chris Fraser	POLO		1B	17	15 1:15.4140	0:16.9840
67	172	Joanne Bell	Joanne Bell	Mini		4A	19	11 1:15.8060	0:17.3760
68	17	Laurance Cripps	Laurance Cripps	VW L Bug		SVB	28	26 1:16.5190	0:18.0890
69	303	Steve Carter	Steve Carter	180SX		2C	15	15 1:17.1970	0:18.7670
70	47	Paul Fenech	Paul Fenech	Beetle		SVB	27	7 1:17.3620	0:18.9320
71	5	Peter Gutmann	Peter Gutmann	Golf		1B	27	11 1:17.3720	0:18.9420
72	74	John Ladomatos	John Ladomatos	VW Beetle		3B	28	14 1:17.6860	0:19.2560
73	6	Jack Gutmann	Jack Gutmann	Golf		1A	28	25 1:18.8070	0:20.3770
74	12	Gail Tucker	Gail Tucker	Boxter			35	23 1:18.8980	0:20.4680
75	79	Eduardo Fleita	Eduardo Fleita	Bluebird		3C	2	2 1:20.6400	0:22.2100
76	19	Benjamin Clapham	Benjamin Clapham	Mini			27	9 1:21.8680	0:23.4380
77	54	David Birchall	David Birchall	VW Beetle		SVB	26	13 1:28.8400	0:30.4100
78	9	Luis Fleita	Luis Fleita	Bluebird		3C	4	1 1:40.0880	0:41.6580

Fastest Lap Av.Speed Is 111kph

R=under lap record by greatest margin, r=under lap record, \*=fastest lap time



## 2016 VW Nationals results.

- 1. Beetle - up to 1957 – Standard**  
1st place: Simon Barnfield
- 2. Beetle - up to 1957 - Modified**  
1st place: Mick Hropic
- 3. Beetle - 1958 to 1967 - Standard**  
1st place: Yara Mannise
- 4. Beetle - 1958 to 1967 – Modified**  
1st place: Zelco Jurkovic  
2nd place: Mark O'Brien
- 5. Beetle - 1968 onwards – Standard**  
1st place: David Westall  
2nd place: Carl Moll
- 6. Beetle - 1968 onwards – Modified**  
1st place: Peter Huckstepp  
2nd place: Morris Bruno



- 7. Kombi T1 - up to 1967 – Standard**  
1st place: Frank Skubla  
2nd place: Jeff Chaseling
- 8. Kombi T1 - up to 1967 – Modified**  
1st place: Gabriel Zamab  
2nd place: Andrew Roberts
- 9. Kombi T2 - 1968 to 1979 – Standard**  
1st place: Gayle Ghalloub  
2nd place: Nik Buttigieg
- 10. Kombi T2 - 1968 to 1979 – Modified**  
1st place: Simon Henderson  
2nd place: Wayne Murray
- 11. Transporter T3 - 1981 to 1992 – All**  
1st place: Scott Pitcher

- 12. Type 3 and Type 4 – Standard**  
1st place: Kat Hawke
- 13. Type 3 and Type 4 – Modified**  
1st place: James Arraiza
- 14. Karmann Ghia - All Years – Standard**  
No entries this year
- 15. Karmann Ghia - All Years – Modified**  
1st place: Ricardo Pereira
- 16. Factory Karmann Cabriolet - All Years – All**  
1st place: James Rae
- 17. Factory Off-Road - Aircooled – All**  
1st place: Geoff Walker
- 18. Non-factory Off-road and Buggies – All**  
1st place: Jonno Baker
- 19. Aussie Convertibles and Kit Cars – All**  
1st place: Paul Fenech

- 20. Best engineered/race - Aircooled – All**  
1st place: Michael Waldron
- 21. Rat class - All Years - All Types**  
1st place: Mitch Kelly  
2nd place: John Sturm
- 22. Polo - All Years**  
1st place: Chris Fraser
- 23. Golf 1 - 1976 to 1983**  
1st place: Dean Kizi
- 24. Golf 2 - 1984 to 1992**  
1st place: Mark Kofahl
- 25. Golf 3 - 1993 to 1997**  
1st place: Carlos Bonini  
2nd place: Junhong Shen

**26. Golf 4 - 1998 to 2003**

1st place: Neven Oreskovic

**27. Golf 5 - 2004 to 2008**

1st place: Raymond Condos

**28. Golf 6 - 2009 to 2012**

1st place: Keegan Naidoo  
2nd place: Daniel Thim

**29. Golf 7 - 2013 onwards**

1st place: Andrew Campbell

**30. VW Convertible (Golf Cabrios, EOS, etc) - All Yrs**

1st place: Sam Colif

**31. Sports Coupe (Scirocco, Corrado, Audi TT) - All Yrs**

1st place: Chris Villatora



**39. People's Choice – Air-cooled**

1st place: Bruce Jones

**40. People's Choice – Water-cooled**

1st place: Tim Furci

**41. Volkswagen Group Car of the Day**

1st place: Pat Eung

**42. Concours d'Elegance category**

1st place: Andrew Roberts

**43. Ray Pleydon Award**

1st place: Ralph Cook.

Photos: Conie Heliotis

**32. VW Sedan (Bora, Jetta, Passat, Vento) - All Years**

1st place: Danny Trudgett

**33. SUV (Tiguan / Toureg / Amarok) - All Years**

1st place: Bruce Walker

**34. VW Commercial vehicles (T4&T5, Caddy) – All**

1st place: Grant Rollinson

**35. Audi - All Years**

1st place: Jose Togle

**36. SEAT - All Years**

1st place: Paul Komnacki

**37. Skoda - All Years**

No entries this year

**38. Best Engineered / Racecar - watercooled vehicles**

1st place: Raymond Quach



## Catching the Bug.

Just a quick note to say how thrilled I was to win a second prize trophy at the VW Nationals. I was surprised based on the high standard of cars. In the meantime I thought I would pen a short article.

As winter approaches I thought I should let you know that despite having had a Flu needle I have caught the bug! Winter is a time to reflect on the VW Nationals weekend (another cracker!) and deal with being inside on these cold and wet winter weekends. I have caught the bug but I have embraced it!

Surfing the net, I have found plenty of reasons to keep warm and still enjoy my passion for all things VW. After many years of research and discovery I want to share my "bug" with other enthusiasts.

When I was 5 we were given three pence pocket money (3 cents). I saved up enough to buy matchbox cars (and still do). That started me on the road to where I am today. And later I started building model plastic kits as well.

Being a Volkswagen collector is all about the joy of sharing with the family and that includes the joy of the miniatures as well.



There are over 90 items in scale, from 1:87 through to 1:18. The detail on these today is amazing.

When my grandkids visit the first request is regularly to look at Opa's (Grandad's) oldie car collection (and take one out to "look at"). The look on their faces is GOLD! Not to mention the look on my face. This is family!

The cabinet in the picture shows a cross section of the VW Beetles, historic military and modern Volkswagens, Karmanh Ghias, Kombis and even early Porsches. And over the winter months I have found VW Beetle kits from Tamiya, Hasegawa, Revell and Airfix. The grandkids know we will be building these together once they are older. And how good is that?

Let the Legend live on!

Carl Moll



## Canley Vale Breakfast with the Cars. Sunday 17 April.

April was a quiet month for club runs, leading up to the VW Nationals. The only event scheduled was a new event – the Breakfast With The Cars, hosted by the Canley Heights RSL club.

This event is actually held every month (on the third Sunday), and Wayne had been along to it before in his Kombi. He reported that it was quite a good gathering, if a little small, but well worth attending. We therefore scheduled it in the calendar for April.

The day dawned a little grey and cloudy, but otherwise good. At 8am a new member was already there in a nice split-window Kombi when I turned up in my Kombi camper, and we parked together in the back row of the car park. Wayne and Laurie soon arrived in Wayne's single-cab, and then Jeff in his Superbug. That made four VWs.



There were about a dozen other cars of other makes too, mostly early Holdens and some large American cars of the early 1970s. Only a few European and Japanese cars, but one silver Maserati was very nice.

The RSL Club had put on a music DJ and commentator, who entertained the owners as they mingled together in the carpark, wandering about looking at the cars. Our VWs drew lots of attention and the other make owners were complementary.

At 9am the RSL Club was open for breakfast, so we made our way inside to the bistro. Most of us had bacon and



eggs with tomato, or buttered pancakes with maple syrup, and some nice strong coffee.

The show started to wrap up about 10:30am. The DJ team decided on a 'car of the day' prize, which went to the Maserati this time. Wayne wasn't able to win it again, sadly. After that, the cars started up and headed home.

It was a very pleasant little show, with a small number of nice cars. Every third monthly show coincides with the local markets, and Wayne tells us it is much bigger on those days. There will also be a large annual show in September, which will have in the calendar - watch for that.

It will be nice to try this show again another time.

Phil Matthews

## Kombis in Concord.

Melinda and the kids were stopped in traffic along Parramatta Road at Concord recently when Brendan spotted several US-spec T1 split screen buses for sale in a car yard across the road. He was able to snap a few shots from his iPad before the lights changed.



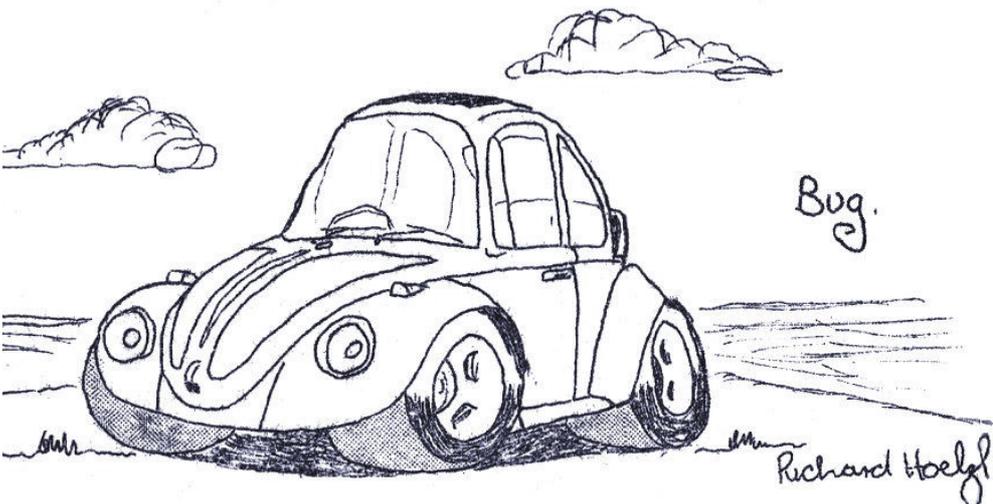
According to [www.edwardlees.com.au](http://www.edwardlees.com.au) (the yard's website) the yellow/white sunroof Microbus is a 1958 23-window Deluxe - for sale at only \$190K (!!!) while the 1964 Sundial camper is a more reasonable (?) \$68,777. Details of the other buses are not on the website. We drove past again yesterday but the yard was closed.

For any club members with deep pockets the dealer's details are:

Edward Lees Imports  
71-75 Parramatta Rd  
Concord NSW 2137

Phone: 02 9744 0539  
Fax: 02 9744 6900

Simon Matthews





## Blast From The Past at Berry. Sunday 1 May.

Once again the Shoalhaven Volkswagen Club put on an excellent 'Blast From The Past' VW show, on the first weekend in May. This is a fantastic day and always worth the drive down.

Our Club had an informal meet-up first in Sydney, to enable a few VWS to drive down together. As usual, we met up at Uncle Leo's Caltex Roadhouse at the Liverpool Crossroads. It had to be early, in order to get to Berry shortly after 9am, so I was at Uncle Leo's at 7am, driving the Bora. Lily decided it was way too early and stayed home in bed.

The morning was a little grey and drizzly but clear weather was forecast. I filled up and grabbed a coffee, by which time a couple more VWs had arrived, an orange T2 Kombi camper and a black 36-bhp oval Beetle. We drank our coffees and chatted together for a while, then got ready to depart at 7:30. I was the only one who had been before, so I elected to lead the little convoy.



Headlights on and I kept the Bora's cruise control at 90 km/h on the motorway south, mindful of the old Oval's limitations. The orange Kombi was easily able to keep up, except on the longest grades. The hour was still early so the traffic was light. We slowed and turned left at Picton Road, and soon joined up with the Pacific Hwy at the top of Mount Ousley. Our three VWs were still cruising together in line.



Past Wollongong and Port Kembla we caught up with a nice green 40-bhp Beetle heading the same way, and rather than pass we slotted in behind the lady driver. We stayed together through Albion Park and the new Minnamurra bypass, then climbed past Kiama and down again past Gerringong. It was here that our convoy was finally slowed, due to the extensive roadwork constructions for the Berry bypass being built.

The old road goes straight into Berry, and the show was well signposted. We turned left, through a roundabout then right into the showground entrance. Shoalhaven VW Club members directed the cars onto the wide grassy show area.

They do a great job of sorting the VWs into 'like' parking areas. The T2 and T1 Kombi lines were at the far right, with a line of T3 Transporters along the front. The Beetles had two rows in the centre, and the Type 3s, Ghias and water-cooled VWs to the left. Kombis again were the





most popular VW, easily outnumbering Beetles, and great to see more early Golfs coming along too.

It was a fantastic turnout and great fun to wander up and down the lines of VWs, chatting to the owners. There were plenty of local VWs (and quite a few from the ACT) that we don't see in Sydney.

The day also coincides with the Berry Market Day right next door, so there were plenty of produce and craft stands to browse and things to keep wives, girlfriends and kids busy and happy.

I had to head home about 10:30am, so I didn't see who won the Club raffle or any trophies. It was a very enjoyable morning and the weather in Berry was good. Thank you to our friends at the Shoalhaven VW Club for a fantastic show.

Phil Matthews



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# Building a Type 1 Performance Engine.

From *Aircooled.net*

This article is intended as a guide to the theory and choices involved in building performance Type 1 engines. There are careful decisions to be made with regard to the engine size and components that are 'right' for what you have in mind. The Beetle is a fairly light car. It doesn't take a lot of power for you to really start to move. 120-bhp will keep most Commodores and Falcons in your rear view mirror on the street, and 180-bhp will take you into Golf GTI and WRX performance territory.



The very first thing you must do is determine exactly what it is you would like to achieve, and realistically assess the budget that you have to work with. Engine selection is a series of compromises - you can't have everything! You have to decide which aspects of engine building and performance are most important to you, and then quantify and assign them each a priority. Ask yourself the following questions regarding:

## Money:

- What is my budget?
- How much will my wife let me spend? (ha ha!)
- Am I happy to spend more money as unforeseen costs crop up (as they will)?
- Am I prepared to put more money into a car than I can reasonably expect to get back out of it?

## Vehicle Purpose

- How will I be using my VW? Daily driver vs. full race vs. weekend warrior vs street cruiser vs. sole source of transportation? Etc.
- Highway or city driving - or both? If you'll be doing any highway driving you'll need a reasonable rpm for your cruising speed.
- How reliable does the engine need to be? Are you prepared to tinker with it every other weekend? Are you prepared to pull the engine for maintenance or repair every six weeks? (The upper echelon (180–200-bhp) of performance VW engines typically need this kind of attention)

## Power and Performance

- How much power do I want/need? Engine power is a function of engine displacement and rpm, and will be the

basis of many of your engine component decisions.

- What is my gearing and tyre size? This determines the operating rpm range of the engine. Am I prepared to change my gearing and tyre size?
- MUST you have those chrome wheels you saw on another car? If they aren't the same size as stock tyres, they will change your final drive ratio and engine rpm.
- How important is engine life/longevity to me?
- What is more important - driveability or performance?
- Am I trying to achieve a certain fuel consumption average?

## Requirements & Limitations

- Must my engine meet any emissions, noise or other legal requirements?
- Does my vehicle type have any inherent performance limitations?
- Where do I live? (Climate and terrain can affect some of your choices too.)

Once you have wrestled with and quantified the above demons, you can match your goals to the appropriate engine size and components. The importance assigned to the above factors will dictate ALL of your engine building choices.

You must understand that focusing on any one particular feature, in most cases will force you to sacrifice in the other areas in order to achieve it. The people who claim that their engine will do 'everything' are talking rubbish. When it comes to performance engines, in general, 'Jack of all trades, master of none' is the axiom that applies. You must be honest with yourself about your intentions and your budget, and hopefully you will be able to find a happy medium between the two.

As performance increases, reliability decreases. Add to this a budget restraining effect, and you can see the balancing act that must occur. Many years ago I too was 'a hopeful believer' in the possibility of building a do-it-all engine... \*sigh\*. But through the school of hard knocks I learned that I was wrong - and now I have 4 cars - each with a specific purpose - drag race, street performance, good original, and early vintage stock. Plus a modern Golf to drive to work every day!

Engine size is a function of piston diameter and the stroke of the crankshaft. Bigger is almost always 'better' (bigger engines will generally have more power at lower RPM, therefore the engine will last a lot longer). But the bigger you go the more expensive your engine will be to build. Also the larger the engine you build, the more complicated and intricate the engine building process.

## Pistons and Cylinders

The air-cooled VW engine uses cylinder sets that are removable: they are not cast into the block like most engines. This makes them fairly easy to replace. I will refer to 'machine-in' and 'slip-in' piston/cylinder sets. 'Machine-in' sets require engine case and cylinder head machining before they can be used, since they are significantly larger than the original sets. 'Slip-in' sets do not require any machining, since they use the stock VW case and head hole sizes and increase piston size by thinning the walls of the cylinder.

1200cc 36-40 HP engines are small, and old, and collectable, and you should not attempt to build a performance engine from these starting points. Prior to 1966,

Beetles and Ghias came equipped with these engines. They make great standard engines for your restored pre-'66 show car, but don't try to hot them up.

The 1300/1500/1600 engine should be the basis for all performance modifications. They are bigger, stronger, newer, and parts are easy to get. The cylinder hole in the case is the same for all 3-engine sizes!

Both the 1500 and 1600 engine use the same size bore in the case and cylinder head, but the 1300 has a smaller bore. This means that a 1500 cc engine can be upgraded to a 1600 cc engine by simply installing the 1600 cc piston and cylinder set! The 1300 cc engine can be upgraded too if you bore the 1300 cylinder heads out to the 1600 cc size, or replace them with the 1500 or 1600 cylinder head.

Almost all piston and cylinder sets are available in two versions: short stroke, and long stroke. The first is used with stock 69 mm stroke engines and the second is used on 78 and longer stroke engines. The difference between the two versions is the location of the wrist pin hole in the piston. Be sure to get the matching set for your crank and rod combo.

Stock VW engines came stock with 77mm pistons and cylinders (1300); 83mm (1500) or 85.5mm (1600). Slip in piston and cylinder sets are available in 87 mm and 88 mm, but we do **NOT** recommend them EVER, PERIOD. There are NO special cases or exceptions to this recommendation. When slip-ins are made, the cylinder walls are thinned so that the larger piston will fit. The cylinder walls become too thin to maintain their integrity as the engine gets hot, and the piston, cylinder, and piston ring seal breaks down. Head sealing failure, compression leaks, overheating, loss of power and premature failure are the result.



**88 mm:** The next bore size up from stock is the machine-in 88 mm set. These work VERY well, but you are looking at a lot of machining (this costs approx. \$200) for a very small displacement increase! If you're going to go to that work or expense, you should opt for the larger piston set. However, 88s are very good for Buses and Type 3 engines, since these engines run hotter than Beetles, Ghias, or buggies/rails.

**90.5 mm:** This is a very common bore size. You are finally beginning to get a substantial displacement increase for your \$. These sets have the same cylinder wall thickness that a stock 1600 cylinder has, so they are VERY reliable. These are an excellent choice, and routinely last 150,000 km or more with proper service.

**92 mm:** This piston set is essentially a 'slip-in' set for the 90.5 bore size. It works okay for low mileage race applications, but it's prone to the same problems as the 87/88

mm slip in combination. I recommended passing on this for street car applications, especially since 90.5s and 94s are available.

**94 mm:** These have the SAME cylinder wall thickness as the stock 85.5 mm set (1600 cc), so they need rather more case and head machining to fit than the 90.5/92s. Another slight drawback is that since the fin area is the same, and the engine is now larger, these DO run slightly hotter than stock or 90.5 piston sets. When these were first introduced, I did NOT trust them! 92s had problems, so how were 94s going to be better? Well, the jury is in and 94s WORK. Reliability is very good; you can expect about 75,000 km before a tear down and replacement is needed. Some sets HAVE gone over 100,000 km when low compression and sane driving are exercised. The machining for 94s costs more than 90.5s, as in addition to 'boring' you must have the case 'decked', so they do cost a little more to build (even though the piston set is about the same price as the 90.5 mm). The additional displacement is definitely worth it!

### Case

The engine case is what holds everything together, so selection and preparation are critical. Use a new case. Simple. NO LINE BORED CASES. Line boring is a Band-Aid, and will most likely result in overheating and low oil pressure problems soon after the engine is built. Don't compromise, and just buy a new case. The used ones out there are worn out and not up to the task, so just factor a new case and machining into your budget from the beginning.

A quality VW machine shop is capable of doing the required machine work to make an 82/84 X 94 mm engine (2275/2332 cc) a SLIP IN. You heard that right. I field questions all the time from people who want more performance, but who are hesitant or simply won't consider something larger than a 74 mm stroke because they are afraid of 'clearancing'. When the parts arrive from the machine shop, or us, just clean 'em up, assemble the engine, make sure everything clears, and that's it. The mystery and concern regarding parts clearancing for large engines is overrated and a highly misunderstood part of performance engine assembly. 86 mm and longer strokes, however, do require more attention to assembly detail.

Use 8 mm head studs. New cases have case savers built in, and these are far stronger than head studs threaded directly into the case. Use factory VW 8 mm head studs (used are fine), since they expand and contract at the correct rate, and keep head torque constant. 10 mm studs don't do this, and that's why 10 mm stud engines have a problem with pulled studs.

### Oil Filtration

Adding a full flow filter is a good idea. The stock engine never had one, but it's an excellent protective measure. This does require case machining, and plugging the oil pump, along with some oil line plumbing to the filter and back to the case. Plan on \$150 for this modification, but it's highly recommended, especially if you have \$10K+ worth of parts that can get damaged by dirty oil!

### Flywheel

Get a lightened flywheel drilled for 8 dowels. You need to wedge-mate the crank and flywheel, or use a 'flanged'

combination, if you are over the 200-bhp mark; or if you plan on drag racing the car with paddle tyres (sand); or using slicks on asphalt. Remember that 6v and 12v flywheels have different starter ring gears with different numbers of teeth, so make sure you get the right one. Also check that your flywheel matches your crank – some VW cranks use an O-ring seal.

### Clutch

Use the stock disc for all applications up to 150-bhp. Use the stock Kombi pressure plate for applications up to about 90-bhp. After this point you need to switch to the Kennedy Stage 1 pressure plate. The Kennedy pressure plate is fantastic, and is good up to about 170-bhp. Higher HP than that and you need the Kennedy-Stage II pressure plate. Drag race and sand must use the Stage II so the clutch doesn't get destroyed! All these pressure plates are 200 mm.

If you have a 6-volt VW, or have a pre-63' Kombi, you likely have a 180 mm clutch. Normally I would recommend that you use the 200 mm clutch size, since it has much more grip. However, for applications with more than 50-bhp and up to about 120-bhp you can use the Kennedy 180 mm pressure plate with a stock 180 mm clutch disc. This is an economical and EASY change that should prevent the destruction of your stock 180 mm clutch (which would otherwise need replacement every 15,000 km). Use of this pressure plate is a smart idea even on stock dual port engines (over 50-bhp, remember?) installed on these early cars. The use of this Kennedy pressure plate eliminates the grinding and fitting of the engine and starter bushing adapters for the 12V/200 mm flywheel and clutches. Simple, huh?

### Crank and Connecting Rods

These two items need to be treated and selected as a set, not as individual components. The stock crankshaft stroke on the 1300/1500/1600 engine is 69 mm. The first consideration is that you MUST have a forged, counterweighted crankshaft. Some companies are selling cast crankshafts. A performance engine will put out more power than stock, and cast cranks will break, it's just a matter of when. I assure you that buying cheap parts two or more times is more expensive than buying the more expensive part once, especially when a broken part takes a lot more parts with it on the way out!



The first crank upgrade above the counterweighted 69 mm crank is the 'Stroker' crank. 'Stroker' refers to any crankshaft with a stroke longer than stock (which in the case of Type 1 engines is 69 mm). This gives more 'leverage'. The driveability and torque of a stroker engine has to be experienced to be believed! A stroked crankshaft allows the

engine to make power without higher rpms. Remember this: Higher rpms wear out parts MUCH faster. Street cars will always see more usable power out of stroker engines than out of a small engine running at high rpm. Thus is true unless you have a buggy or sandrail, which are both very light.

Here comes your first decision point, and as I warned, it's dependent on your budget and goals. All sizes of crankshafts are comparably priced (around \$1,200) - the cost difference is in what additional parts they require for reliable operation. I never recommend reusing or rebuilding old rods. Other companies may suggest the use of reworked stock connecting rods (which will cost around \$150) - but when you can get new 4340 I-beam rods for \$200 a set, it doesn't make any sense. If your rods fail, you get to START OVER FROM SCRATCH since all your expensive parts are junk - new everything - so why risk it?

When you stroke an engine, I feel there is no point in using a crankshaft smaller than 78 mm. Stroker crankshafts are all the same price from 74 mm to 84 mm. The only reason you would ever use a stroker smaller than 78 mm would be if you are racing in a class that limits your displacement. 78 mm is the largest stroke you can reliably use with reworked stock connecting rods (but remember I don't recommend that!) With the 78 mm crank you can get away with using a \$150 set of reworked connecting rods (or the \$200 4340 I-beam connecting rod set, which is a real bargain!)

82 mm crankshafts require the use of I-beam or H-beam connecting rods. H-beams are lighter and stronger but cost about \$250 more than I-beams! If you are on a tight budget, and want to maximize your displacement you should go with the 82 mm with I-beams.

84 mm strokers require a different connecting rod, which costs more. The price difference between the rods for the 78 mm crank and the rods for the 84 mm crank is around \$260. The decision between I-beam or H-beam connecting rods depends on the maximum rpm you plan on operating the engine at. 4340 Chrome-moly I-beam rods are good to 6500 rpm, and if you plan on going higher than that (or want peace-of-mind) you need the 4340 Chrome-moly H-beam rod (about \$500-600 a set of 4, depending on length), which is good to 9000 rpm or 500 HP.

Next increment is the 86/88/90 mm crankshaft. I recommend going to a Type 4 centre main bearing on a crank of this size, or even Type 4 mains all the way along (special engine case machining is required for this installation). The larger main bearing makes the crankshaft stronger, and you need it if you have a stroke of this size! Plan on \$2,500 for one of these large cranks, not including the \$500 connecting rod price.

If you get one of these cranks, you also need a SPECIAL set of long cylinders, which run about \$550 a set of 4, and do NOT include pistons or rings.

One more thing: things start getting pretty tight in that engine with a crank of this size, so you had better know what you are doing if you get one!

### Connecting Rod Length

'Rod Ratio' is the length of the connecting rod divided by the crankshaft stroke. The small end of a connecting rod is affixed to the centre of the bore of the piston, and the big end is attached to the crankshaft. If you increase the crankshaft stroke, and do NOT also increase your rod length, the rod



angle is increased. 78 mm is the maximum that the stock rod can withstand; beyond that the bolts will fail. Longer crankshaft strokes require a longer connecting rod, and/or a stronger or a better-designed rod connection system. This is exactly what 4340 Chrome-moly rods accomplish.

69-82 mm crankshafts can use the VW (137.0 mm) or Porsche (136.0 mm) length rod, IF it is made of Chrome-moly. Once you start using an 84 mm crank, you are required to use a 140 mm or longer connecting rod so you don't overstress the rod and rod bolts! I recommend a 144.8 mm or longer rod for strokes longer than 88 mm.

Another thing to consider when you increase connecting rod length is that the longer the connecting rod, the further out from the crankshaft the piston is, and could potentially stick out the end of the cylinder. Since the cylinder is attached to the crankcase, you need to use cylinder spacers to adjust the compression ratio to where you want it to be.

The longer the connecting rods are, the wider your engine will be. This does not matter for an engine installed in a sandrail, dune buggy, or racecar. However, the Beetle, Kombi and Ghia engine compartments are fixed, so you have to worry about engine width.

The engine compartment of your vehicle is going to dictate some of your engine choices because of the relationship between rod length, crankshaft stroke and engine width. You can't fit an 84 or longer stroker engine in an Oval Beetle engine compartment without a good amount of work to 'narrow' the sheetmetal, unless you use overly short connecting rods. But these short rod engines will have a VERY premature engine life, and a very limited rpm range (I don't recommend them). The extra work involved with 84 or 86 mm stroke engines in small compartments is not worth the performance gain. In addition to the engine work, the longer strokes require that you also address the issues of the exhaust system and tin being too narrow, etc. Putting an oversized engine in a small engine compartment is a very involved step, with many ramifications that need to be addressed.

### Cylinder Heads

This is where most engines (including yours) are really restricted, and where money spent will really make a difference. Find the most expensive set you can afford, then get the ones 1-2 steps higher than that! Even an 1800cc engine can make 160-bhp if it has good heads (although it has to spin high rpm, which wears things out quickly).

A cylinder head houses the valves and spark plugs and functions as a 'cap' on the cylinder to complete the closed system. Each head covers two cylinders. The heads control engine air and exhaust flow via the valves and the ports. The intake valves let the air-fuel mixture into the cylinder, and the

exhaust valves let combustion by-products (exhaust) out of the cylinder.

Which cylinder heads you buy is mostly dependent upon your budget. The more money you spend, the bigger ports and valves you will get. Larger valves and larger ports mean more airflow. The more air that can flow in and out of your engine, the more potential you have for power. You can purchase racing heads which have HUGE valves and ports, but have diddly for cooling fins, so they may not meet your application needs. The race cars that these heads are designed for only run for 2-3 minutes at a time, so engine cooling is not a priority. For any other application, cooling is a MAJOR priority. So, pay close attention to cooling fins!

There are two basic types of cylinder heads that can be used on an upright engine and the number of intake ports differentiates them: Single Port or Dual Port. Single Port heads have one intake port that serves 2 cylinders. Dual Port heads have an intake port for each cylinder. Obviously on Single Port heads, the shared intake port is more restrictive and will limit power potential. For stock engines, single-ports are simple and reliable, but I strongly recommend the use of the dual port head if you are going the performance route. Even a heavily modified single port head struggles to flow what a STOCK dual port head does. But, on the other hand, if the engine overheats, a dual port head is more likely to crack than a single port head is - so this is where the factor of engine life comes in. Don't get me wrong though, a dual port head can easily last over 150,000 km without cracking, if the engine isn't abused.

I am not familiar of any aftermarket head (Superflo, Competition Eliminator, Street Eliminator, etc) that has adequate cooling fins for long term street use. Just because someone drives their vehicle on the street doesn't mean they are running a head that is optimised or appropriate for street use! These aftermarket heads run much hotter than heads based off of the 040 castings (a.k.a., the stock dual port casting). Many people ask about the 044 heads; I have seen too many of these crack, and the valve seats fall out. I don't carry them because of these problems.

Many other heads seem impressive to potential customers because they have big valves. Most of these 'big valve' heads have stock size ports. Chalk it up to another nonsensical design flaw, but these DO NOT WORK. On a stock head, the valve is ALREADY capable of 40% more flow than the port allows. The PORT is the limiting factor. Think about it - if the head port only flows a certain amount, the installation of a large valve does not help, since the valve is not the restriction! Marketing hype at its best.

In the line of performance cylinder heads that we carry, the Series 3 head is a great starting point, and is the bare



minimum I would recommend if you want to increase performance.

The next head I recommend is the Series 6 head. The Series 6 is a welded head, which has more material around the port so that it can accommodate reshaping and relocation. Besides size, a welded port allows the intake port and valve to be relocated for smoother flow than what you get from the original location.

The Series 3 and 6 heads are also fully driveable. You'll be able to drive easily if you get stuck in traffic, or want to take a nice drive out with your mum or a date.

When you move up to the Series 7 heads, you will experience a decrease in driveability with the increase in power. They are more of the off-or-on type; they don't do too well below 3000 rpm, but at higher revs - hold onto your hat! These heads are more difficult to drive easy, but are the leader in horsepower. This head puts your engine in the 190-bhp range assuming the rest of the engine is set up to make use of it. An equivalent head to this model from other companies is about \$3200 a pair! Use the product descriptions in our catalog to help you choose the right set of heads for your engine.

### Carburetion

This will be just a brief summary based on our experience, and not a full discussion of carburetor selection.

Off road cars should use a centre-mounted IDF Weber or Dellorto with manifold heat. Streetcars should use dual 2-barrel Webers or Dellortos once they reach the 65-70-bhp point (pretty easy). Race cars should use race carburetors - 48 IDA Webers. IDA Webers really require modifications if they are going to be used on the street. These modifications make them easier to drive by improving the progression circuit. Out of the box, IDAs are pretty much either off or on. Imagine driving a car with two power settings; idle and full throttle! That is what the IDAs are like if they aren't modified!

If you have a set of IDAs you would like to use, give me a shout and I will steer you to a guy who is a whiz at carbs, and who will set them up properly, to spec, during a rebuild. I generally recommend that people size their carburetors like this: the venturi sizes should be about 4-5mm smaller than the

intake valve on mild engines, and 0-3 mm smaller than the intake valve on very high performance or race engines. Now, this is only a GENERAL guideline to get you close. Heavy cars need to be more conservative (smaller) on carb sizing. Light cars can be more radical.

### The Valve Train

The valve train is term that describes the system of parts that work together to actuate the valves in the cylinder heads. The crankshaft turns the camshaft. The camshaft lobes push the lifter outward. The lifter pushes the pushrod outward. The pushrod pushes out on the rocker arm, which pivots like a seesaw and opens the valve directly.

What is Lift? Valve lift is the measure of how far the valve is opened at its maximum. More lift is better when trying to increase engine power, because more valve lift increases airflow and thereby increases power potential. To achieve more valve lift you can change the camshaft or the rocker arms.

There are basically two extremes of lift you can achieve. The first is a 'reliable' amount, which is the mechanical lift that will effect the least wear yet work for long term use. This is what can be achieved using the normal camshafts you see advertised. There are also 'high lift' cam designs that give maximum power, at the expense of noise (they are louder), and accelerated wear to the valve train. Normal high performance camshafts have valve lifts in the 0.400" to 0.450" range and high lift cams have greater lifts that 0.450". Do not expect a high lift cam to live longer than 60-70,000 km on any engine!

What is Duration? Camshafts are rated/ compared by crankshaft duration. Duration is the number of crankshaft degrees that the valve is open - in other words, for how much of the crankshaft's rotation is the valve open? There are two slightly different standard measures for duration: Advertised Duration (total crankshaft degrees that the valve is open), and .050" Checking Duration (crankshaft degrees that the valve is open AFTER 0.050" of lift). The longer the valve is open above 0.050" lift, the more airflow you will achieve at high rpm, but this is at the expense of low end power. In camshaft selection you trade off low rpm for high rpm power or vice versa.

### Camshaft

This may come as a surprise, but basically, the advertised camshaft duration is a meaningless standard of measure. The .050" number is what really tells you how the cam will behave in a certain engine. This is because airflow through the heads is not significant until the valve is open .050" or so. In general, the more duration a cam has the larger the engine needs to be to run it, AND the higher up the engine's rpm band will be. Cam selection should really be done last, after choosing heads, carburetion, and exhaust. Consult an expert. When in doubt, go smaller. I am a proponent of huge engines and mild cams. This provides INSTANT power, without having to rev the engine a lot (which only wears out parts fast).

### Valve Springs

If your engine will be revved over 4500 rpm or if you use a camshaft bigger than stock, you MUST have heavy duty (HD) valve springs. If your engine revs over 6000 rpm, you



MUST have dual valve springs. If it is over 7500 rpm, you are into Chevy valve spring territory. THERE ARE NO EXCEPTIONS TO THESE RULES! When you upgrade to HD valve springs, you must also upgrade your pushrods and rocker arms.

### Pushrods

Only chrome-moly pushrods are strong enough for performance engine applications, and they must be the correct length (remember - pushrod length changes as the engine width changes). Proper length ensures that at 'half lift' the rocker arm is pushing the valve straight in. If rocker geometry is off, the valve will be pushed sideways up or down, and this results in valve guide wear. Get it right! This is one of the most intricate parts of engine building. Cutting and assembling your pushrods is a real pain but must be done correctly. For assembly purposes, you need an adjustable pushrod to have any hope of achieving optimal rocker geometry. You use the adjustable pushrod to cut your chromoly pushrods to the desired length then tap the ends in using a hammer and two old lifters (to keep from screwing up the ends of the pushrods). Sometimes, depending on the pushrod brand, they have to be drilled out to match the pushrod ends!

### Rocker Arms

Stock VW rocker arms are reliable for stock use, but are frail for applications that exceed the conservative stock design parameters. The stock rocker ratio was 1 to 1 on early 40 hp engines, and this ratio changed to 1.1 to 1 on late 40-hp engines and all 13/15/1600 cc engines. This ratio is the relationship between pushrod movement and valve movement. Simply, a camshaft with 0.300" lift will open the valve 0.300" with 1 to 1 rockers and 0.330 with 1.1 to 1 rockers.

Once you decide to run at higher than stock rpm (4500 redline), or install HD valve springs, or a high performance camshaft, the stock rocker assemblies WILL fail, it's just a matter of when.

The solution is to either strengthen the existing rocker assembly or install the alternative, Ratio Rockers.

To strengthen a stock rocker assembly, you simply shim the rocker assemblies to remove the 'wavy washers' (the washer with a concave shape). Replace them with solid washers. The washers come in varying thicknesses (0.4, 0.8, 1.5 mm), and you swap them in and out until you find the combination that gives you about 0.13 mm per rocker side clearance (side play that the rocker has). It's a pain at first, but after a bit you get the hang of it. Rocker shim kits are around \$20 and take a few hours to put together.

If you upgrade to dual valve springs, you also need to upgrade to solid rocker shafts, with bolt on ends. Plan on \$90 for a GOOD kit. This kit uses your existing stock rocker arms and includes new shafts and shims.

The alternative to stock rockers and associated modifications, are ratio rockers. Ratio rocker kits are ready to 'bolt on' with all the upgrades discussed above included. Ratio rockers have a 1.4 or 1.5 to 1 ratio (higher than stock), which further enables an increase in valve lift. It's important to note that the

camshaft has a limitation on how fast it can accelerate the lifter and the valve train. This means they can only open the valve so far before they have to start closing the valve again. The ratio rocker arm overcomes this limitation since it multiplies cam lift to result in additional valve lift. It's one of the few parts that let's you have your cake and eat it too! No trade-off!



The stock camshaft is compatible with ratio rocker upgrade due to its conservative design. But there are also camshafts that are specially designed for use with ratio rockers. The result of using a ratio rocker cam with ratio rockers is that more valve lift can be achieved without sacrificing durability or engine life. The downside is you can expect to pay \$2-300 more for a ratio rocker arm equipped engine, since you have to buy the ratio rocker set. If you have an engine equipped with a ratio rocker camshaft, you could use a stock rocker assembly, but you'll sacrifice performance, the cam will last forever since it's so under-stressed, but you'll be defeating the purpose of a high performance engine component! Some people build their engine with the ratio rocker camshaft and use stock ratio rockers temporarily, with the intention to upgrade rockers later (for budgetary reasons). But if you do this, don't forget that pushrod lengths are different for stock rockers and ratio rockers, so that is another consideration.

John Connolly



## Volkswagen Touran SE.

By Jeremy Clarkson

After a long, dreary drive down the M1 last weekend, the sat-nav said I had just 10 km to go. And even though it would be 10 km across London, I figured that in a half-hour I would be kicking off my shoes and sitting back to watch television and eat chocolate.

So would you like to guess how long it actually took to cover those 10 km? No, I'm sorry, but you're not even close. It was two hours and 35 minutes.

I have never seen so many roadworks and cones and temporary traffic lights and buses on diversion. And in every single one of the endless snarl-ups there'd be an Uber-driver in his infernal Toyota Prius making everything worse. Or a senior citizen in a Peugeot.

It's a fairly typical story these days. Everywhere you go, the roads are being turned into cycle ways and bus lanes and pedestrian zones. Which means you are being inconvenienced while the council builds something to inconvenience you forever.

Last week that made me stare with barely concealed contempt at the gearlever in my Volkswagen Touran test car.

"Why," I wailed inwardly, "would anyone buy a car with a manual gearbox these days?" It's like saying: "I don't need a television with a remote control. I'm perfectly capable of walking over to it and changing the channel myself."

Yes, on a racetrack or a deserted switchback road in the Atlas Mountains a manual gearbox is sublime. Snapping it up a cog when you reach the red line and double declutching on the way back down. . . ooh, it makes me go all tingly.

But we don't drive on race tracks or in the Atlas Mountains. And here a car with a manual gearbox is just annoying.

I had this in mind as I sat in the Touran,

fuming, that these days the only people who would buy an old-fashioned gearstick manual are the sort who choose not to have a washing machine because they prefer to clean their clothes in the local river.

It seems I'm wrong, however. Yes, automatics are becoming more popular, but even so more than 70 per cent of all cars sold in Britain have manual gearboxes. That means more than 70 per cent of Britain's car drivers are mad.

There was a time when automatics chewed fuel, weighed a tonne and cost about the same as a house. And there was a time too when the halfway-house arrangement – usually a manual gearbox operated without a clutch pedal via flappy paddles on the steering column – was jerky and complicated and completely incapable of setting off without making more smoke than a

World War I battleship. Those days are gone. Flappy-paddle gearboxes now are sublime. Fast. Easy. Rewarding. Nice.

But there I was in the Touran, pumping away at the clutch and manually moving the sort of lever that would be familiar to any Victorian signalman. And I felt like one of those people who won't have a mobile phone because they've a perfectly good Bakelite rotary-dial landline telephone at home.

Anyway, the car. Well, it may be called a Touran and it may be billed as a people carrier – it comes with three rows of seats – but when all is said and done it's a Golf. So you get all the Golf features, including eco-tips that flash up on the dash asking you to maybe think about driving more ecologically, to which you can now reply: "If I wanted to drive ecologically, I wouldn't have bought an effing Volkswagen diesel, would I?"

You also get a sat-nav system that sometimes turns itself off. A quick check on Google says this is a common fault and the cure is to stop the car, get out, lock it, unlock it, get back in and start the engine again. In other words it's the same as your PC, your phone and your laptop. You turn it off and on again.

And that's about it so far as faults are concerned. Even the styling is right, chiefly because there isn't any. It's modelled, from what I can see, on the box in which chest freezers are delivered, and that's exactly how it should be,





thought this one through.

To drive? Well, apart from the manual gearbox, it was pretty good. Perhaps it's not quite as comfy over the bumps as a Renault Scenic, but the upside of this is the people in the back are less likely to vomit should you find yourself on a switchback road in the Atlas Mountains.

I've said for many years that the only people carrier worth buying is Volvo's XC90, but the new one is very big – and pricey. I also used to quite like the Vauxhall Zafira, which had a clever seating arrangement, but I see from the tabloid newspapers that these days Vauxhalls are even more likely to burst into flames than hoverboards.

So if you've given up on life, you've got children and you just need a sensible Golf-like family car to move you around while you wait to die, the Volkswagen Touran is probably your best bet.

(Note – the VW Touran is not imported into Australia.)

#### **VOLKSWAGEN TOURAN SE**

Engine: 2.0-litre, four-cylinder diesel

Outputs: 110 kW at 3500rpm, 340 Nm at 1750rpm

Transmission: Six-speed manual

Average fuel consumption: 4.4 litres per 100 km

Verdict: Give us an automatic for the people (DSG is available as option)

because anyone who needs three rows of seats has plainly done the children thing and no longer has any need for sleek curves and a barking, snarling exhaust.

Inside, the seats can be moved about so easily even I managed it without swearing. And when they are folded away, the boot is more than 700 litres bigger than the boot in a Golf.

And get this: there are 47 cubbyholes. Which means it's no use at all for someone who needs 48 places to store stuff. But for everyone else it's great. My test car also had a glass roof. Which was nice, for no reason I can think of.

Other touches include an optional system with an app called Cam-Connect that when used in conjunction with a GoPro Hero4 camcorder

feeds an image or – if you're stationary or driving slowly – footage of what's happening in the back to the screen on the dash. I thought at first this might be some kind of porn-based feature, but it's so you don't have to turn round to see if the children are fighting.

And you don't have to shout at them either, because your voice is picked up by the hands-free unit and fed via the speakers to the people in the back. VW really has



## More on air filters.

I've just finished reading a thread on air filters. If you haven't read it, you probably should. Marvellous stuff. Laughed my ass off.

Yes, there is a US design standard for automotive air filters. SAE J726 (or maybe 826... there's more than one).

Read the specs? Okay, here's pop quiz: Other than the Beta test (ie, ratio of particles that make it through a filter as compared to the number of particles which go into a filter), have you ever wondered how they arrive at those "efficiency" figures? Come on, think about it. No filter is 100% perfect for all sizes of particulate contaminant. So what are they comparing things to? What is the nearest thing they have to a perfect air filter?

Would you believe it's a multi-stage kinetic type filter, usually having a water-bath catchment... covered by a thin film of silicon or mineral oil to reduce evaporation?

Although we're talking laboratories here, the principle is the same as the oil bath air cleaner on your Veedub. Not small, though; you can walk inside some of them. And except for HVAC applications they're almost always used with pre- and post-filtering, including electrostatic precipitators. (Anyone who has ever worked at a chip plant knows about this stuff. Even old sailors, like me because the government has its own chip plant, inside the fence at Ft. Geo. Meade, home of the world's longest indoor shooting gallery... and one of the cleanest 'clean rooms' on the planet.)

But the subject of comparison also applies to the air filters for cars and the point a lot of folks missed is the fact treated paper filters (ie, a non-kinetic labyrinth-type filter) are compared to an oil bath filter (which typically scores about 99.9%).

And those marvellous K&N filters? Last time I checked, they're compared to paper filters. (Go on; lookit up; K&N has a web site and is justifiably proud of their product, which works at least as well as a paper filter, so long as it receives the proper periodic maintenance and liberal doses of K&N's magic elixir.)



All of which means that clunky, old fashioned oil bath air filter on your bug or bus is still a hands-down winner... for anyone who cares to do a bit of reading :-)

As for all that 'flow-rate' stuff... Anyone care to take a WAG at the flow-rate for your 1600cc engine, roaring along at

3500 rpm? No? Howzabout a 2550cc big-bore stroker turning five grand? (Hint: Be prepared to be underwhelmed.) But bigger is always better, right? So more flow has gotta be good, right? Horseshit. The fact a particular filter can flow more air doesn't mean your engine can use it. Those counter-top 'comparison' units are just a sales ploy; a kind of IQ test for the technologically naive.

Read the specs. Flow is relative to the pressure differential and restriction. The bottom line is that your oil bath air cleaner does just fine, folks. Always has and always will, so long as you give it the maintenance it requires. For stock engines an oil bath air cleaner has no problem providing more air than the engine can use. (If you think about it for a minute you'll understand why that has to be so.) In fact, the stock oil bath air cleaner works just fine for engines up to about 2200 cc so long as they don't spin over 5000 rpm, a fact you can work out for yourself with nothing more exotic than an HB yeller pencil and basic arithmetic. Working it out will also give some idea how much you'll have to shorten the service interval when you use an air filter designed for a small engine on a big one. And the service interval of any air filter is a critical factor in determining its practicality.

Indeed, the service interval is one of those things the tea-cozy crowd doesn't like to talk about. As with any labyrinth-type filter, their effectiveness is a function of surface area. Under harsh conditions, where you might need to service an oil-bath air cleaner as often as once a day, you may need to wash & re-oil a gauze & window-screen air filter every few minutes... which is why you don't see such filters used for real-world applications.

Don't take my word for any of this. After all, nobody is right all of the time :-). Think for yourself. Go look it up. Work it out. It's your ride and it's entirely up to you what kind of filter you use. You're the Mechanic-in-Charge, not me.

In fact, lemme repeat that: You are the Mechanic-in-Charge. Making the right choices is up to you. All I've done here is express an opinion, albeit one based on experience. In effect, I've described a particular path. The decision to explore it - or not - is yours.

The only reason I've bothered to say anything at all is because automotive engineering is not subject to the democratic process. Having a big mouth doesn't automatically make you a good singer, nor a loud voice a good speaker (although it helps :-). The fact someone posts a thousand messages a month does not mean the messages contain anything worth reading. Apply that logic to the fact all your buds are using gauze & tea strainers for air cleaners and you'll see it only means it's a popular idea, not necessarily a good one. The task of determining the merit of something is up to you. And I'm not just taking cars here. Every person is capable of error. That fact extends to every organization as well because organizations are nothing more than collections of people. And if you think an individual can screw up, our personal faults pale by comparison to the outright evil of which groups are capable. (And yes, you can look this up too if you wish. Although since 9-11 I've got a hunch most folks can figure it out for themselves.)

The wiser course, in my opinion, is to always think for yourself, even if doing so sets you apart from the majority. Because when push comes to shove, it's your life. And your ride. Not theirs.



Bob Hoover

PS -- Oil bath air cleaners fell into disuse for passenger cars because of economic factors, environmental issues and the sheer size of the damn things.

The size issue had to do with their height. To work properly an oil bath air filter must have a certain minimum height. If you had a 'tall' engine yet wanted a low hood line you had to move the oil bath air filter over to the side, as Volkswagen did with the Karmann-Ghia, Hudson with their dual-carbed 'Hornet' and others. But doing so increases the parts count and complexity of the system and such things carry an inherent increase in maintenance cost. Which leads us to...

The key economic factor in the demise of oil bath air cleaners in cars had to do with the time needed to properly maintain them. I can't remember the Flat Rate Manual for servicing an oil bath air cleaner but it was on the order of 0.5 m/hr. No big deal when making 'good money' meant a dollar an hour. But nowadays spending half an hour to clean an air filter would be economic suicide for a dealer paying his line mechanics \$37.50 an hour plus full medical, dental and so forth. (What's it take to change a treated paper air filter? Maybe a minute... if you've never done it before. Less, for an experienced mechanic :-)

The environmental issues with regard to oil bath air filters wasn't so much the oil you poured out of the thing. Hell, recyclers will pay you for the stuff. What really sets a tree-hugger's hair on fire is seeing that drum of sandy sludge -- the scrapings out of the bottom of the oil pan -- accumulate over in the corner of the lubrication bay. A high percentage of the particulate matter found in the air above most roadways is toxic. And you've just concentrated 55 gallons of the stuff (and usually hauled it off to the local dump). The solvent-filled parts washer you ran it through was another E-ticket ride for tree-huggers. Not only did it generate its own quotient of sludge, in normal use it pumped a few pounds of hydrocarbon aerosols into the air every day. By the time you've shifted to a water-based high pressure detergent washer, or added a vapour recovery system to your solvent tank and negotiated a HazMat contractor to collect and dispose of the sludge, servicing an oil bath air cleaner has become a very pricey proposition.

There's plenty of justification for doing away with oil

bath air cleaners. But their ability to clean the air wasn't one of them. Indeed, such filters remain a standard method for many industrial applications, as a bit of research will show.

## Crankcase Basics 2.

Before wasting any time here, go read some of my previous articles on crankcases (eg. Zeitschrift July 2013 and July 2015), especially the part where I say:

"...you will need nuts and washers and bolts to fasten the case studs and parting-line. Here again, there are kits available but most are the shoddiest stuff imaginable and price is no guarantee of quality. The nuts and washers may have a wash of zinc plating, good for at least a week's exposure to the weather. Or they may not. And you can toss the 'exhaust nuts.' They are copper plated steel. (The good stuff is bronze.) Before you can use any of this crap on an engine you must provide it with some form of corrosion protection. If you don't, not only with the nuts rust to the studs, you'll see galvanic corrosion between the washers and the crankcase that will eventually cause the fastener to loosen."

Although any after-market VW retailer will be delighted to sell you that shoddiest stuff imaginable, the hands-down winner is J.C. Whitney because they usually charge more than most.

Back when I had hair I wrote an article ('Cows') explaining why it was a good idea to NOT buy VW parts from J.C. Whitney. Fig 1 offers a nice example of why this is still true. In the picture you can see the supposed 140-piece contents of JCW's catalog #xxx380749. (The 'xxx' is the catalog prefix which changes from minute to minute but the basic number stays the same.) A fellow chugger paid \$15.99 plus shipping for what you see in the photo only to discover that most of the fasteners were unusable or not needed. (As of 8/23/07 the price is \$17.99 making it even worse.)



Here's why: See those sixteen M10 nuts? (Lookit Fig 1A over the page.) Didja notice the M8 head stays illustrated in the 'Crankcase Basics' article? The M10 nuts & washers are for a pre-1971 crankcase, which you are not using if you're building your engine an a Universal Replacement Crankcase. And if you are starting out with a used crankcase then the odds are you already have a perfectly suitable collection of M10 nuts & washers.



Indeed, other than the six M12 nuts shown in Fig 1B everything else shown in Fig 1 is available from the local Borg for significantly less than JCW prices. But even then, the JCW parts are not the sort of stuff you want to use when assembling a good engine.

A point often overlooked by the shade-tree types is that several VW fasteners are also oil seals. The washer and in some cases, the nut, must be prepared and installed in such a manner as to prevent oil from leaking out around the fastener. The best example of this is the four lower head stays on each side of the engine that are terminated inside the valve galleries but this rule also applies to the six M12 nuts, the pair of M8 studs adjacent to the #1 cam bearing and the two M8's that support the #4 Main Bearing.

Fig 3 shows the type of M12 nut used on later-model Volkswagen engines. The red ring is an elastomeric seal that bears against the heavy washer which itself is bedded in Permatex or other non-hardening sealant, another of those 'unimportant' details casually disregarded by non-professional engine builders, most of whom insist that it's normal for the VW engine to leak like a bitch. Being a stock VW part, the nuts are commonly available but their price varies wildly from an honest thirty-five cents or so to more than a dollar

from the typical Screw-the-Newbie suppliers (who always seem to run the biggest ads :-)

I'll cover the proper application of fastener sealants at the appropriate time. Or you can dig it out of the VW factory service manuals.



But the most regrettable failing of such hardware kits is their failure to provide real exhaust nuts. What you get is a regular steel nut with a wash of copper plating, guaranteed to last for at least thirty minutes before welding itself to the exhaust stud. What you want is a bronze or brass nut, installed upon a bronze, brass or copper washer with a lavish application of anti-seize compound. If you have a small lathe these are easy to make from bar stock but they are also available from the Usual Suspects.



Fig 4 shows a baggie of brass exhaust nuts sized to accept a 12mm wrench, allowing them to be used on the lower exhaust studs without interference when using a custom-built exhaust manifold as is common with modified or aircraft engines.

To me, an engine is a forever kinda thing. There is no Magic Bullet. The reliability of any machine is nothing more than a reflection of paying the keenest possible attention to the smallest details of its assembly. Using the correct fasteners is a big part of that.

Bob Hoover




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