

2

issue two

MKIII MAGAZINE

MKIII.NET

CARS

98 golf gti

thatguybry

97 jetta

christian kitchnens

98 vento

stefan h

98 golf cabrio

bryan crook



CREATIVE

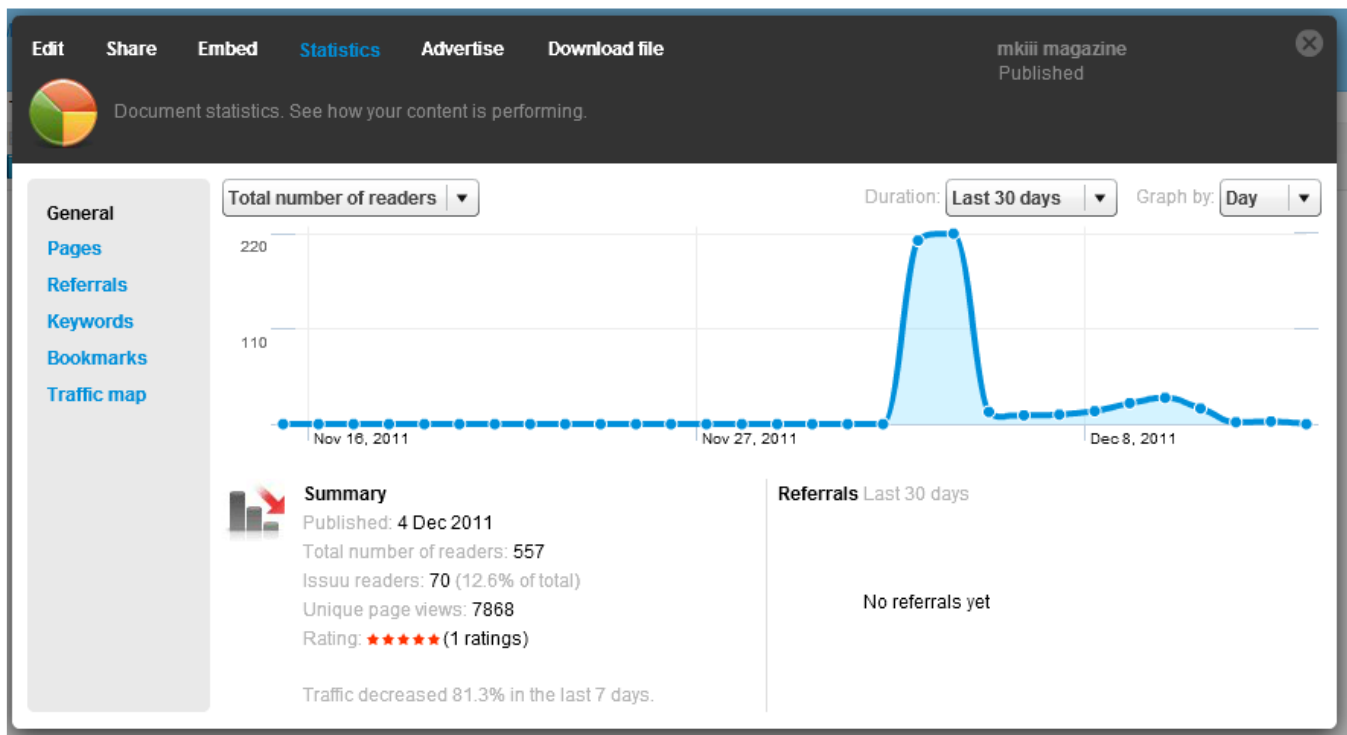
drawings
rare colours
custom hoods

feedback

Comments , etc

Well the first issue went pretty well. I kind of rushed it out a little before it was completely polished. The feedback was overall pretty good. I would have liked a few more views and downloads but I am thinking it will be a little more popular once its indexed on Google and various search engines. Below is some comments from people and stats from one week after publishing issue one. I will try to proof read things a bit better from here on out. I would like to personally shout out Matt Greene and his lovely wife.

thanks
-jvon



danjreed : AWESOME!!!!

cha boi : I heard this was like Hustler for 90's Volkswagens that were made in Mexico.

Smead : That Mk3 Mag is Ace.

elizawint : Everything looks great! Good job jvon! :D

sean : everything looks great jay. thanks for putting in time on it :thumbsup:

contents

Whats inside this issue?

cars

4 98 golf gti
bryan tr

6 92 vento
stefan h

8 97 jetta
christian

38 98 cabrio
brian crook



 jared houston



10 rare colours
surf, mulberry, indian, dusty, and more!

14 artsy stuff
that guy bry hoods, mk3 drawings

22 because racecar
how to build a relatively inexpensive, reliable, powerful V6

 jared houston

MK3

98 Golf GTI

When did purchase this car, what year is it and what made you choose this?

I bought her on Cinco De Mayo 2009. It was a dark gloomy day. I needed a car after loosing my windsor glx to a GMC Envoy. I wanted a GTI after owning all jettas and sticking with a mkiii was my only option. I love the body lines and shape of the car as well as everything else about them .Some call me crazy but again this is a mkiii mag so most of you reading this will understand. The car is a 98 leftover Drivers Edition with all its red bits still intact.



Who helped you to build the car?

I'm one who attempts to do as much as I can myself so no shout outs to any shops. Mandy my girlfriend is always there to encourage me as well as my friends being patient with me for those late night phone calls asking for info...so thanks to Dustin Drummey, Brian,Kyle and many others.

What makes you car special or unique?

I would say the cusom painted hoods I paint make it unique..but also that its mine ,built for me and loved by me driven by me.

How satisfied with the outcome of the car 1-10 point scale 10 being super satisfied? What do you still want to do or change to the car?

At this point right now I'd say an 8.5. It's on the road and running and show season is over so I have some time to fix and mod some more stuff. My dry erase board has a 3 foot long list of things to do for next season, but trust me this car will never be called done and never will be a 10 in my book but I'm very happy with it. It's what keeps me going.

If your car was an icecream flavor which flavor would it be?

It would be called Red Roxie, a nice smooth cherry flavor with chocolate covered cherries in it but the cherries are soaked in grain alcohol to give it a little bite.

What is the furthest trip you have taken with this car and did you have any issues while doing so?

Drove her to Watch Hill, RI from here in PA which is about 350 miles one way. It drove very well and got good mpgs while doing so.....and was pretty comfy so no issues... The same went for the trek to H2O this summer..

Who do you feel the biggest douchebag on the vortex is?

Douche bags on Vortex ,not possible ..idk whay you are talking about.

Is there anything else you wish to share?

Visit my facebook page... That Guy Paint Werks

MODS

air ride - bagyard shocks with easy street management ,dual 444s and a slim 5 gal tank.
red anniversary seatbelts
hella all red tail lights
red headliner
hidden radio
stubby mirrors
Mk4 montreal 1's with 195/45/16 tires



thatguybry

thatguybry

five

MK3

92 Vento

When did purchase this car, what year is it and what made you choose this?

The car was bought by my grandfather in 1992, when he passed away my mother was owning the car until 2006 when she died due to cancer. Since this day I was keeping the car as a memory.



 Alexander Tscheppen



 Alexander Tscheppen



 Alexander Tscheppen



 Alexander Tscheppen

Who helped you to build the car?

I only build this car with help of my friends.

What makes you car special or unique?

It's clean look and the turbo makes the car special.

How satisfied with the outcome of the car 1-10 point scale 10 being super satisfied? What do you still want to do or change to the car?

I would give the car an 8...because I'm not happy with the engine bay, it could be a lot cleaner and freshly painted.

If your car was an icecream flavor which flavor would it be?

Red Bull flavoured Ice Cream would fit the car best...

What is the furthest trip you have taken with this car and did you have any issues while doing so?

The furthest trip I did with the car was when I drove to Italy for vacation. 500km one way. No problems with the car...:-)

Anything else you wish to share?

I would like to thank Alex Tscheppen from cultmedia for taking such nice pictures of my car..."Live for everything, die for nothing!" - Stefan H



MODS

-Swapped a VR6 instead of the old 1.8L --> right now I finished the GT30 turbo build -changed the axles into axles from a VR6 all parts had been sanded, powder coated or repainted with new bolts and original VW parts -installed the board computer -ABS Mark20 -H&R adjustable suspension -Bastuck exhaust system 2.5" (63.5mm), 200 cpi catalyzer --> due to the turbo I also changed this into a 3" HMS exhaust system with 100cpi catalyzer -BBS RS301 7.5x17 machine polished by Grommes with 185/35 from Nankang front offset 23, back offset 03 with 3° negative chamber -Recaro Colour Concept leather interior from a Golf 3 -4x electric window liftes installed -seat heating installed -Projektzwo mirrors -clean Hood -clean bumpers, shave license plate molding -yellow fogs from the French modell - carbon covered engine parts -Porsche Breaks at the front axle -red tail lights -Lupo GTI steering wheel -Golf 5 shifter -rolled fenders with OEM angle in front and back -new painted 2010

Alexander Tscheppen

MK3

97 Jetta

When did purchase this car, what year is it and what made you choose this?

I purchased the car back in late 2009, from a family friend for \$1k. It had about 99k miles on it, and it was running like crap. It ended up being a bad MAF! Its a 1997, Candy White 2.0L 8V slug! I've been lurking the Vortex for a while, and I feel in love with the MK3 generation! That and it was so cheap, with such little miles!



 christian kitchens



 christian kitchens

 christian kitchens

Who helped you to build the car?

I've had a lot of help building this car, whether it be moral support or getting their hands dirty. My buddies Eric Jergensen, David Olsson, Christian Lavyera, Tim Redding, Mike Baker, Brian Vilante have all had their fare share of what I would call help with in this build... so far ;)

What makes you car special or unique?

What makes my car special is how far it has come with in the time I've owned the car. Not only has it been through good, and bad stages but I've managed to get it right where I want it to be.... for now :D

How satisfied with the outcome of the car 1-10 point scale 10 being super satisfied? What do you still want to do or change to the car?

I'd have to give my car a 6. I love the way the car is at the moment, but I still have a lot plans for the car. One of the first things I will be working on this year is the engine bay. I wanna focus on a full wire tuck, do a little bit more engine work/cleaning the engine, doing a stage 2 kinetic turbo kit. As far as the exterior goes, I'd love to shave the antenna hole on the fender, do a fully shaved front bumper, fix the little dents/dings around the car. New wheels at some point, I wanna go with 17's.

If your car was an icecream flavor which flavor would it be?

Vanilla mint ice creamz yo.

What is the furthest trip you have taken with this car and did you have any issues while doing so?

The farthest trip I've taken my slug is about 800 mile trip

Who do you feel the biggest douchebag on the vortex is?

The biggest douche bag on the tex would have to be candywhitesniff, because his car is by far the best looking candy white Jetta I've set my eyes on ;)

Anything else you wish to share?

Thanks to all

MODS

Air suspension:

8 valve

7 switch box

5 gal tank

350c compressor

Airlift fronts

chapman rears!

Wheels: Konig Candy 15x7.5 et 35

Front: 15x7.5 et 35 + 7mm spacer

making final et 28, stock full camber

Rear: 15x7.5 et 35 + 20mm spacer

making final et 15, one washer on

each lower right axle stud. Tire size:

165/50-15 federal formoza all around.

Engine: 266/270 tt cam with matching

tt chip, BBM HD valve springs,

custom short runner intake manifold.

Exterior: shaved side markers,

shaved shark fins, shaved trunk FK

smoked long turns/fogs, early

European Vento grille, ABT rep

smoothed/textured side skirts.

Interior: Full MK4 Wolfsburg seats,

maroon red diamond pattern

headliner/trunk lid carpet, MOMO

steering wheel/hub.



WUT?

What colour is that?



Indian Red / LA3V



Moonlight Blue / LC5M

ten



Classic Green / LC6U



Porcelain Blue / LG5U



Cinnabar / LK2Y



Laser Red / LY3H



Steel Blue / LB5T



Suede Silver / LG7X



Dusty Mauve / LC5P



Ice Grey Violet / LK4U



Surf Green / LG7N



Dark Teal / LA6U



Mulberry / LG6R
thirteen

HOOD

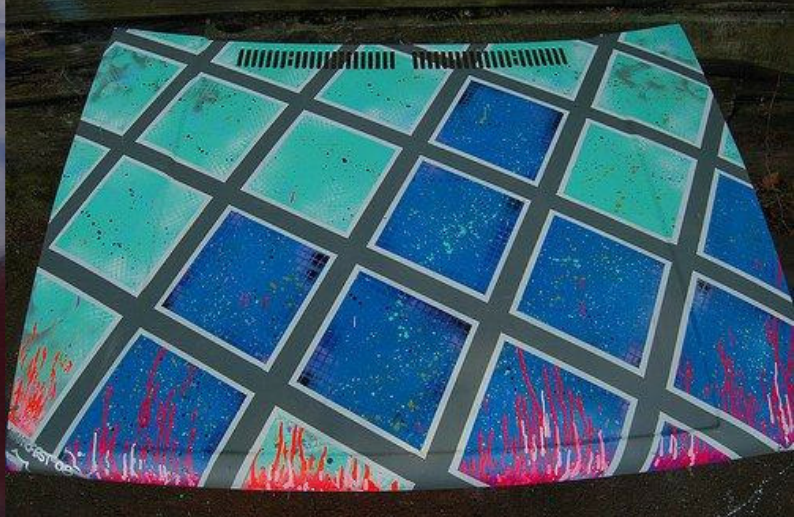
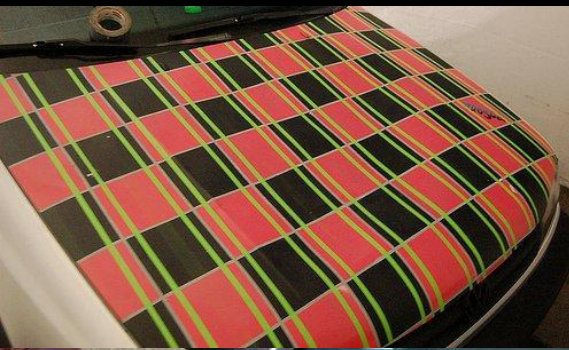
Custom painted designs



Located in small town in PA there is a crazy scientist in his secret paint booth creating some awesome looking custom painted hoods. Any generation VW or any car in general that has a hood could be fitted with one of his unique designs. You can find all his designs and contact info on his facebook under That Guy Paint Werks. At time of writing this he just finished up #45. I am definitely going to cop one of these for my MK3 sometime soon. Be sure to check out the feature on his car on page 4.

 [thatguybry](#)

 [jvon](#)

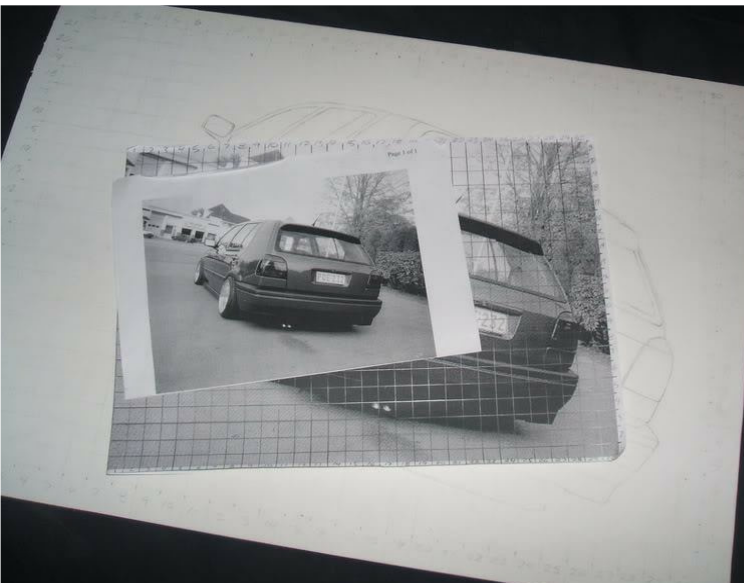


ART

MK3 drawn art

I scoured the internet to find some art created by people with the subject matter of MK3s. Some of it was hard to track down the creator to credit so if you know who drew one of the peices or you drew it please contact me. Some amazing stuff was found, and clearly MK3 owners are the most talented people out there. 🙏

 jvon





 beatmilk


sixteen



 danjreed

Draw Your Dream Car! 

 MK III
GOLF



My Name is DAN J REED Age 35
I drew this at SAM, (Saratoga Automobile Museum)

 leeds





MK3.5
VRT

Yves Jan
12/10/06



SLC VRT

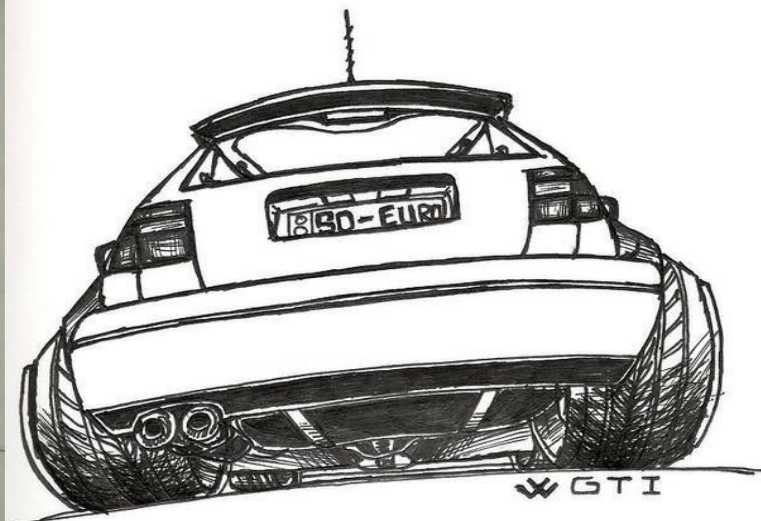
Yves Jan
12/9/06



GTi

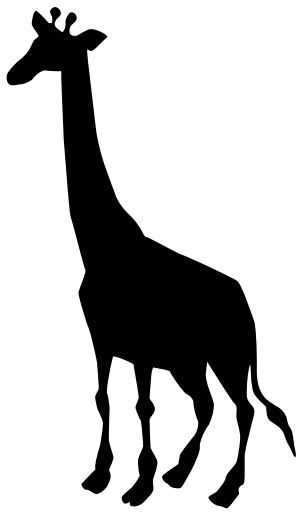
Yves Jan
9/30/2006





betajunk

CUSTOM STICKERS

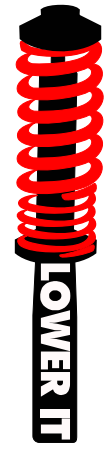


AIRBY
ROBLES



*
jawn

ALL
POST



SHIRTS



OTHER

BECAUSE RACECAR

How to build a relatively inexpensive, reliable, powerful Vr6

1. Air Intake(Stock-cai)

A Vr6 car is equipped with a stock airbox from the factory. It is popular to replace the stock paper filter with a K&N. This is nice as it can be washed and reused. However, it has been tested that a fresh paper filter actually flows better than a K&N. There are minimal gains to be had by cutting the lower portion of the box and grinding the webbing from the upper portion.

Cold air intakes need to be the type that goes down into the fender/bumper to be advantageous. Many have discomfort with the filter being so close to the ground for fear of sucking up water and hydrolocking. These intakes will make more power than a cut airbox, but I do not feel that they are a cost effective way to gain power until further modifications make the airbox increasingly inefficient.

Because of the nature of the stock Bosch Mass airflow sensor(MAF), simply putting a filter or a 'short ram' intake onto the end of the MAF is not effective. This sensor requires a flow of air devoid of turbulence, which is taken care of with a 'turn2' style cai. I lost a significant amount of power on a dyno going to a filter on the MAF. →



1.8t IAT(Intake air temperature) sensor-This has been proven to give 2whp on the dyno by Paul, need_a_vr6. The stock IAT sensor is closed element, and prone to heatsoaking in the VR manifold. The 1.8t sensor plugs directly in, and when wires are extended to a location that gets proper airflow, away from hot engine parts, proper IAT's are achieved. The ECU interprets this data, and gives a tick more ignition timing.

1.8t sensor:



2. Upper intake elbow

© Copyright

This is not an overly problematic component. I have made 204whp with a stock upper intake elbow. The OEM PCV valve is a problem. A PCV valve's function is to vent positive crankcase pressure back into the intake, while restricting oil from passing through. This valve seeps a large amount of oil, and makes the VR6 motor a very dirty running motor. For this reason, it is important to routinely remove the elbow to clean it and the throttle body. Some choose to run a 'catch can', which allows for crankcase ventilation, and catches excess oil from being cycled into the intake.

The only aftermarket replacement is the ABD big bore intake. These sell for entirely too much in the classifieds, but they do eliminate the banjo section. Gains are minimal. I would not recommend doing this as a preliminary modification, and it's a stretch to be worth it in any situation.

3. Throttle Body

The OEM throttle body is not overly problematic. The OBD2 throttle body(96-99) is slightly larger than the OBD1 throttle body. They cannot be simply swapped as the bolts are different sizes, and the TPS(throttle position sensor) is wired differently. I have read that the wires can simply be swapped around for the OBD2 TPS/tbody to be used on an OBD1 car. Porting should be kept to a minimum, especially on OBD2. A gutted, or 'deramped' throttle body oftentimes causes idling issues on stock engine management. →

4. Intake Manifold

This is in my opinion, one of the most problematic parts of the VR6 engine. The stock intake manifold has an upper and lower portion. The throttle body inlet is about as restrictive as restrictive gets. It transitions from the circular throttle body to the flat plenum area with a steep ramp, and multiple internal parts sticking out directly into airflow. The plenum, or the open area before the runners is not a major problem in stock form, but the transitions into the runners are very restrictive. The plug wire holes are directly in the airflow, the dividers between runners are thick, and rigid in construction, and there are multiple internal bolt holes directly in the airflow.

Modified/aftermarket options:

Ported lower intake This largely contributes to having a complete, matched intake and head. It doesn't really need a whole lot of opening/reshaping, but it can be smoothed, and mated appropriately with the upper intake and the head.

The 2.9 Manifold- In Europe, some vr6's were 2.9l instead of the usual 2.8l. These had a different upper intake manifold in which the entire space under the manifold is used as a plenum, allowing for more airflow, and slightly more power band. Many choose to cut the middle channel from a stock 2.8 manifold in an effort to clone the euro 2.9. The important thing to remember here is that all 2.9 clones are not created equal. There is much work to be done in smoothing the dividers and transitions into the different runners. The throttle body inlet should be modified. Again, this is not something that should be a preliminary modification as there are parts further down the line that need addressing first. These are of my ported 2.9 clone. The corner that restricts cylinders 5 and 6 is toward the left in the first picture. →



Precautionary: In the stock lower intake manifold, there are circular dowels that are designed to help the upper and lower manifolds seat together. Remove these and throw them out. Sometimes, they come out unexpectedly and go down an intake runner, causing valvetrain damage. Ask me how i know. This dowel is in the lower right of this picture:



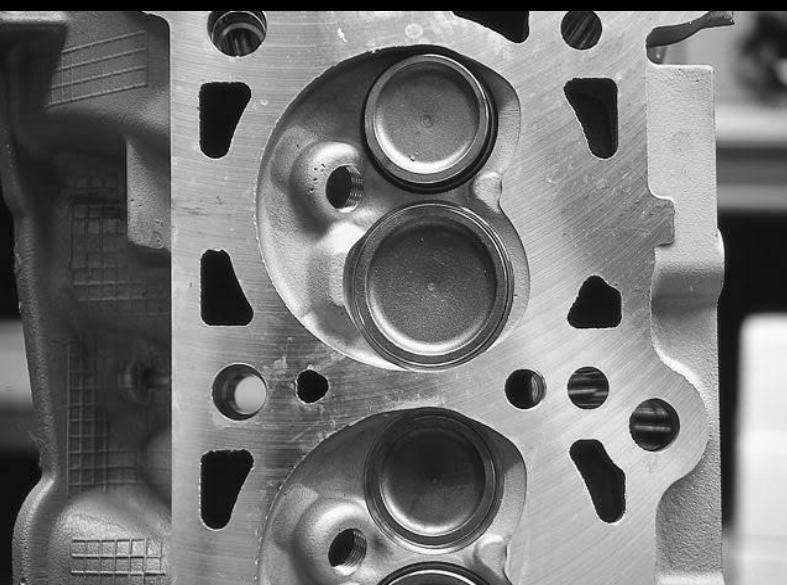
Short runner intakes- In general, shorter runners and a bigger plenum promote a higher power band and less torque. That is, the majority of the car's power will be shifted to a higher rpm given other components promote this. The basic short runner, 'log manifold' has been used to some success on n/a drag cars, but this is in limited numbers and accompanied with supporting mods such as large camshafts, and large diameter exhaust. The gains are difficult to quantify as this has only been used as 'part of a setup', and not simply an addition to stock.

There have been a few equal runner length short runners built custom. These are ideal as the runners in the intake compensate for the varying lengths in the cylinder head. With just an intake swap from a 2.9 clone to this type of staggered sri, i gained 30whp at 7k rpm, however, i lost 15ft/lbs of torque and a significant amount of hp through my midrange. Think of a more honda like powerband than a vr6 powerband. These gains occurred with no tune change, or cam change.

5. Cylinder Head

This is the root of the problems in this motor. This is a 15degree 6cylinder engine with staggered cylinders and one cylinder head.

The vr6 has a FLAT cylinder head. The majority of cylinder heads in the world have recesses in the block side called 'combustion chambers'. This motor, with the head being flat, has the combustion chamber in the piston itself. On cylinder heads with combustion chambers, it is possible to 'deck' the head, removing material from the bottom of the head, making the combustion chamber smaller, and raising the engine's compression. Raising compression adds power, but is not possible in this way, on this motor. Head with combustion chamber: →



The engine functions as a 'bent' straight 6 in that there is one intake side, and one exhaust side to the motor. The camshafts are not in control of independent banks (intake/exhaust). Each cam takes care of intake AND exhaust, so the runners for intake and exhaust sides vary in length to reach their respective cylinders. On each side there are short runners and long runners, each carrying their own problems in terms of port shape. The varying length also makes the harmonic balance of airflow in this motor very difficult to master. In an ideal world, all intake runners should be the same exact length and volume, head through intake manifold. The same goes for exhaust ports through exhaust manifolds. The world isn't perfect, we'll work with what we've got unless you're looking to build varied length runner manifolds, which have been done to great effect. However, for the purposes of this thread, that won't be covered.

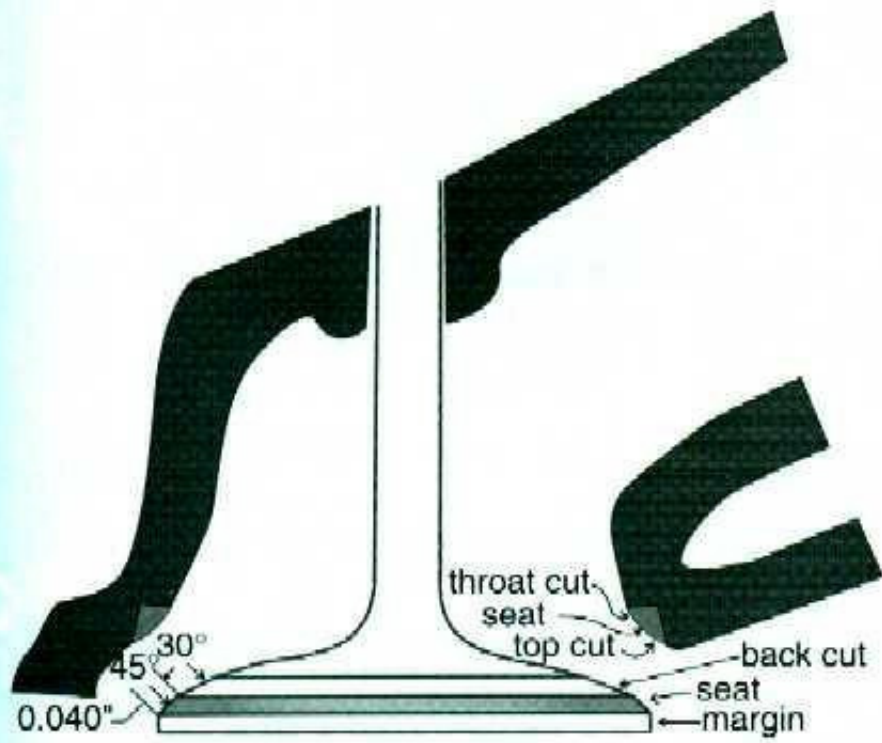
Porting- This section is really general, and possibly pointless. Some say that headflow can only be measured on a machine called a flowbench. Others say that headflow can only be tested at the track. So, I'll just give you some ways to look at it. The best way to learn is to grab a spare head, and get at it. There is MUCH that can be done to shape these ports better. Again, I'm no pro when it comes to porting, but I can give a couple areas of interest.

For materials, I use mainly sanding rolls on aluminum and a straight die grinder. These can be found on Eastwood. The valves must be out of the head.

Intake ports should be a bit larger than exhaust ports, but not too large. Size can help flow, but maintaining a small enough volume to maintain air velocity is just as important. One way of thinking about a port is as a siphoning hose...in order to maintain constant, fast flow, it cannot have too much volume, nor can the volume change throughout. "Bowl" areas should be focused upon. This is the transition down to the valve seat, and where most losses on stock heads occur. Long VR6 ports are misaligned with the center of the valve seat. Short ports have waves in the walls that can be smoothed.

DON'T SIMPLY 'GASKET MATCH'. This is changing one area of the port's volume, and hurts flow. It is important that a port's entrance not be smaller than the outlet that precedes it, but that does not mean that it is effective to 'hog it out'. I put a considerable amount of work into the head on my race motor, and I'm nowhere near gasket size in most cases. →

Mildly Ported short intake runner:



Valvejob-This is how the valve seat is shaped. The smoother, or more cuts that are taken(3 angle, 5 angle, etc) the less restrictive it is on airflow. This is widely considered to be the most important aspect of performance headwork. Being a delicate, skillful process, this is something I trust a machinist to handle for me. I have made as high as 210whp on stock valves with a quality valve job.

6. Valvetrain

There isn't a whole lot wrong with the stock valve train(valves, valve springs, retainers, keepers, lifters). The main precaution to take is to upgrade to a set of performance valve springs, serving two purposes.

- A. To prevent the spring from binding because of aftermarket camshaft lift.
- B To keep the valve from 'floating', or hanging open too long, and being struck by a piston.

For Motors with aftermarket cams(except for low lift cams such as autotech 262's) or forced induction, this should be looked at as a mandatory item.

Except in extreme builds, I don't see a reason to upgrade any other component. Having a machine shop back cut stock valves offers some power, and what I consider a 'might as well' if you have the head there.

It is debatable in my opinion whether bigger valves actually make more power. BVH are not worth all the hype and cost associated, especially dealing with a stock sized bore. There is a concept of headflow called "shrouding" that basically says when a valve is too close to the edge of the combustion chamber(pistons in our case), or cylinder wall, flow is restricted. The fastest 12v vr6's have stock size valves. I also believe that this is made more dramatic as a result of our head being flat. Google "valve shrouding" for more info. FWIW, dynos of some of the old school uber desirable bvh's have shown little to no gains over stock heads.➔

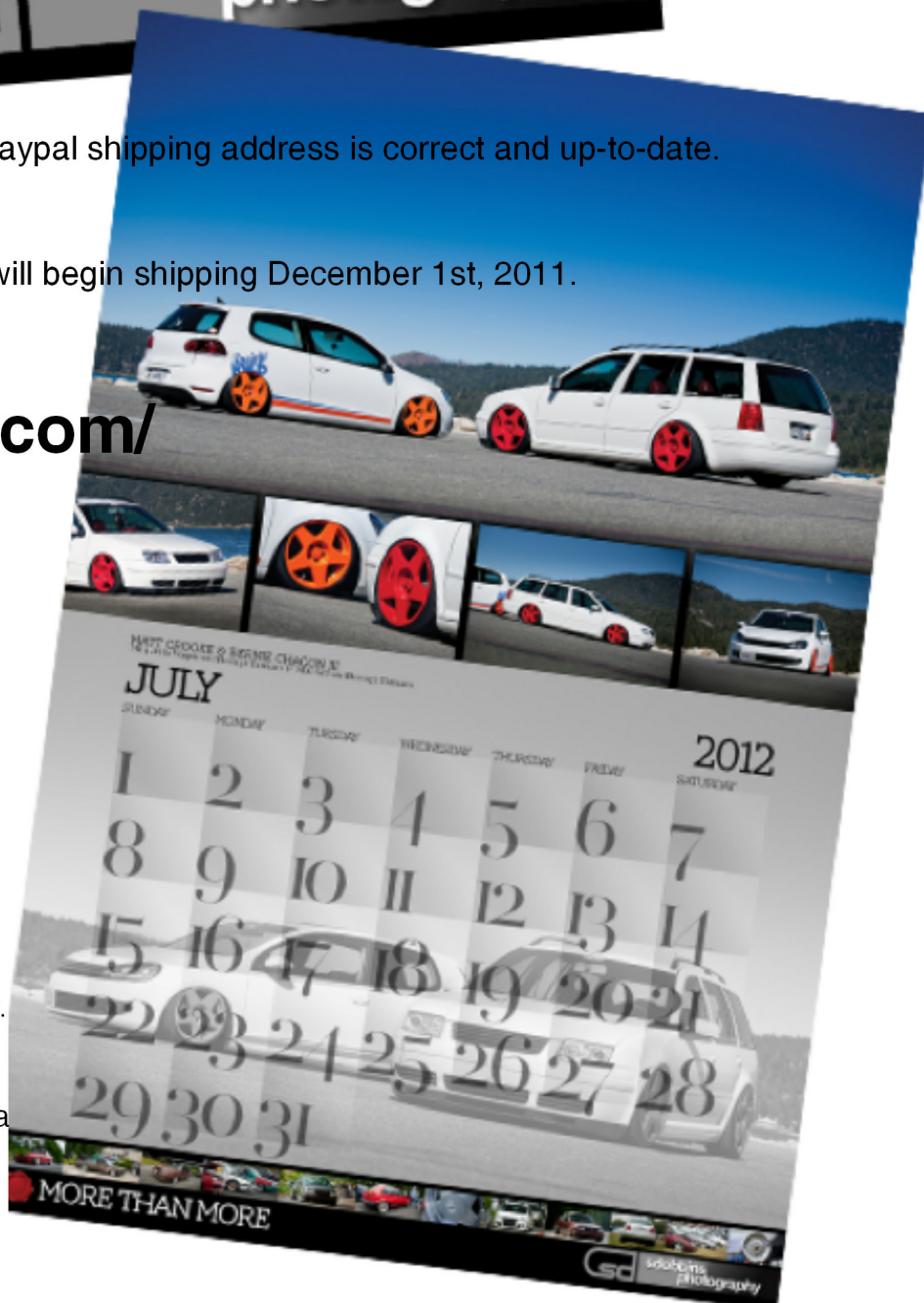


Please ensure your Paypal shipping address is correct and up-to-date.

***All presale orders will begin shipping December 1st, 2011.

www.sdobbins.com/

“We don’t know about you, but we reckon that there is something very cool about having a Dub calendar to plan the year’s show season on. In fact, with so many shows and meets already booked in for the 2011 season, having somewhere to keep yourself organised is probably more important than ever before! Which is why we’re so pleased to announce that PVW contributor and all-round US hero, SDOBBINS Photography has just put the finishing touches to its new 2011 calendar. Featuring 12 heavy hitting cars, from Walt Flores’ 500whp Vaporado and Nicul Harkison’s bagged Passat CC, it really is a must for your garage or workshop wall.”
 ~Performance VW Magazine, December



Downpipe: The inlets are tiny! They've also got a big weld on the inside of the inlet flanges! AHH! Solution, have the flanges welded from the outside, and grind out the inner weld. I also usually grind a good bit out of the flange itself....one part i do gasket match. If you do these things, get fresh gaskets. They're cheap, and exhaust leaks are no fun, or good for solid o2 sensor readings. Paul made a diy on this: <http://forums.vwvortex.com/zerothread?id=3603731>

10. Exhaust

I feel that if you have a stock car with some bolt-on's, you can't beat the Tectonics 2.5" with a borla. The price is reasonable, the quality is solid, and they make good power. Once cams or headwork are added, I suggest a 3" exhaust system. I gained 7whp and 5ft/lb going from a 2.5" system to a 3". (specifics shown in the link below) Mandrel Bending solutions produces the only bolt on 3" exhaust system for our cars. Nice, quality stuff here.

Testpipe-This replaces the stock catalytic converter. Honestly, our stock cat isn't horrible for what it is. 42draft designs makes a great piece. Evan is the man 42draftdesigns.com



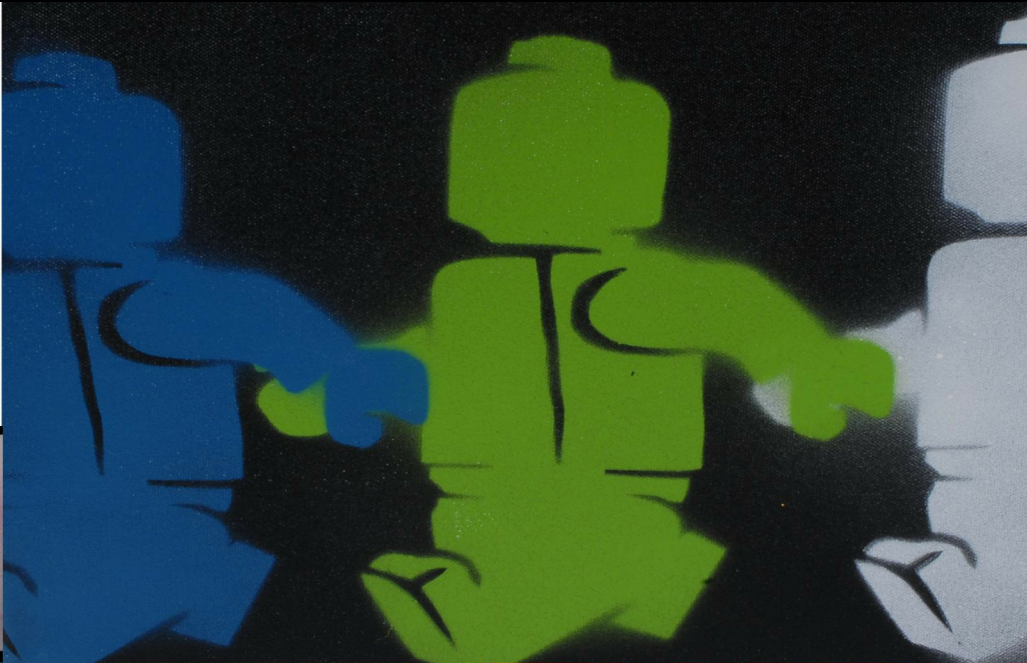
Timing chains! These will go bad anywhere from 80-200k. Sooner if maintenance hasn't been up to par. The only thing i've got to make clear here is how to properly intall the upper hydraulic chain tensioner. This looks like a 27mm bolt on the back of the upper timing cover.

1. Submerge tensioner in oil, i like to use a clear cup.
2. Pump it a couple times to get the air out.
3. Once your cam gears are on, put your upper timing cover, and install the tensioner.
4. Turn your motor over a bunch of times by hand, and triple check timing before reinstalling your intake and starting. This builds some oil pressure up, and lets your chains get jiving in the right direction.

Timing is always the last thing i do before starting an engine. If you time it, and let it sit, it can very easily hop a tooth on one cam overnight.➡

Plan R

Art & Photography



Graffiti-inspired Art
Photography
Landscapes
Portraits
Engagements
Event
Automotive

planrforrobert@gmail.com
flickr: PlanRforRobert
FB: Plan R Art & Photography
Instagram: @planrforrobert



11. Engine Block

“The Miracle Stock Block” The majority of the best power on N/A Vr6’s has been made on stock blocks. They’re very stout, and take a ****load of abuse. Stock, they have Forged Crank and Rods, and Cast pistons. None of this limits power to the point that anything on top of the motor does. Most don’t mess with it whereas the norm in other car communities. This is normally a very costly part of building a motor. One reason stock blocks make good power is that oem vw bearings were of high quality. They hold up well, and at a higher mileage, their wear simulates a 'loose' motor. Oftentimes, when race motors are built, clearances(rod/bearig/crank, and main/bearing/crank) are kept larger, or 'looser' than what might be used on a street motor in an effort to help everything rotate easier and with less restriction. Cliffs: If your rings are holding compression, leave your block alone.

Pistons-A bigger, higher compression piston will always make more power. Forged piston sets for these motors are usually 7-800 dollar range before the required machine work. Stock bore is 81mm, and 83.5mm can be had using a stock head gasket, bringing it out to a meaty 3.0l. Oem cast 2.9l vw pistons are also available at 82mm. In terms of compression, there haven’t been many high compression vr builds to my knowledge. Higher compression makes more power, however I believe that there are valve clearance issues to be considered when beginning to bump compression beyond 11 or 11.5:1 depending on the exact design of the piston, and how much the block and head have been decked. This avenue is fairly unexplored. Stock 81mm piston vs. Wiseco 83mm



Precautionary Rod bolts-If a VR6 'blows up', it most likely spun a rod bearing. This is mainly due to oem rod bolts being a little cheesy. They are stretch bolts, and simply wear out over thousands of miles. The best option here is to install arp rod bolts into a stock motor. There is info out there advising to clearance the rod caps for these bolts but I have experience running these bolts in stock motors/rods with no work done. Simply remove 1 bolt at a time, replacing with the arp hardware and torquing to ARP’s specifications(very important). I have seen stock blocks with arp rod bolts hold up for a long period of time on VRT’s in the 500hp range. There's one doing 150 in the 1/4 mile and making 700+ horsepower. →

12. Flywheel/Pullies

Flywheel

This is the first thing bolted to the engine's crankshaft between the engine and the transmission, and is what the clutch bolts to. The lighter it is, the more power it should make in theory. Having experience with the range of weights, I currently run the Autotech 7lb piece. For my purposes, it is best. However, for a daily, I'd stick to the 10-13 lb flywheels as they offer a little more feel, and 'umph' when starting off or shifting. Many have claimed that light flywheels cause clutch chatter, but I have never had this experience. I believe this is a sign of junk components.

Flywheel bolts

Oem works fine for the most part. The Stock bolts are stretch bolts, and SHOULD be replaced every time the flywheel is replaced. If you really want to get busy with it, Arp flywheel bolts for a mustang work. A VR6 needs 10. 10mmx1.00. <http://www.summitracing.com/parts/ARP-254-2901>

Pullies

Lighter is better. How much performance is it worth? I don't know. Less stuff spinning, more efficient. If it's a issue of whether or not it's worth the money, the crank pulley is the most effective as the stock one is very heavy. The stock pulley offers some harmonic dampening, but not enough jump up and down about a lightweight crank pulley. There are some performance harmonic dampeners out there being developed for the VW market, but even if these to become available for VR6's, I wouldn't worry about it except on a turbo car.

13. Clutch

For most purposes, especially on a n/a street car, the stock sach's clutch is great. When getting into shifting hard, or when a lot of wheel hop is present, the first thing to break are the straps and rivets on the stock pressure plate. If an upgrade is necessary, at one time i would have recommended Clutchnet. However, recently it seems as though the company has lost a key player. Quality and customer service have suffered. People are all over the place when it comes to what clutches are reliable. I know of some running Bully clutches. I'm currently having great luck with a Competition clutch Stg3 with a kevlar segmented disk. Others are having luck with various stages of Clutchmasters. The big thing you're looking for is upgraded straps and rivets in the pressure plate. Also, for a street car, don't get a pucked disk....look for something full face or segmented, and with a sprung hub. Do not buy a solid hub disk. Just don't get a SPEC. SPEC is garbage for our cars for whatever reason. They do great things for other makes from what i hear, but they routinely fly apart within a few hundred miles.

Precautionary

Clutch safety switch bypass

Your clutch saftey switch is located behind your dash support, at the top of the clutch pedal. This is a 2 pin plug that plugs in toward the firewall. Unplug your clutch safey switch, and jam a regular old fuse in the plug to jumper the two sides together. This allows you to start the car without pressing the clutch down.(early cars start without the clutch in anyway) If you upgrade your clutch to an aftermarket pressure plate, you should not be starting your car with the clutch depressed. With this much spring pressure, it is very stressful on your engine's thrust bearings, particularly when the car isn't running. Thrust bearings keep the crank centered in the engine, front to back. So this can lead to problems in the bottom of the motor....crank walk. So, you're going to have to remember to knock it out of gear from now on.

AIRBY ROBBLES

Precautionary:

Upgrade clutch fork: With a stiffer pressure plate, many have bent their clutch forks. This is the piece that the slave cylinder pushes to release the pressure plate. Flipside customs makes a nice reinforced clutch fork that's hard to beat in terms of price and quality. <http://www.flipsidecustoms.com>

www.flipsidecustoms.com

Pressure plate bolts: I like to replace these every 2nd or 3rd time i put a clutch in a car. I torque them to 20ft/lbs, and use blue loctite. These tend to back out, so do this right.

14. Cooling System

Precautionary:

Thermostat/Fan switch : Except in particularly cold climates, on any vr6 that is modified, I recommend at least a low temperature thermostat and/or a low temperature fan switch(in the radiator). These are hot running motors, and they run well like that. However, when timing is advanced or when compression is raised, they can 'ping' or detonate when hot. These are cheap, and function as maintenance items anyway.

Coolant-Many swear by and only use g12 for coolant. I see no problem with that. Personally, it's easier for me to obtain regular old dexcool, so I run that. I haven't seen any issues running it in my 7 years of vr6 ownership, and in large amounts of side work. Even if it has whatever properties in it that cause whatever properties in vw aluminum to wear over time, it's not enough to get all fired up about.

Water pump-The stock one is plastic impeller, and it's FINE. I've never acutally seen the plastic portions wear, it's always a impeller shaft seal or the o-ring that goes first. Vr's do not have the same problem that 2liters have here with the plastic impeller. If you really want a metal one, that's cool too.

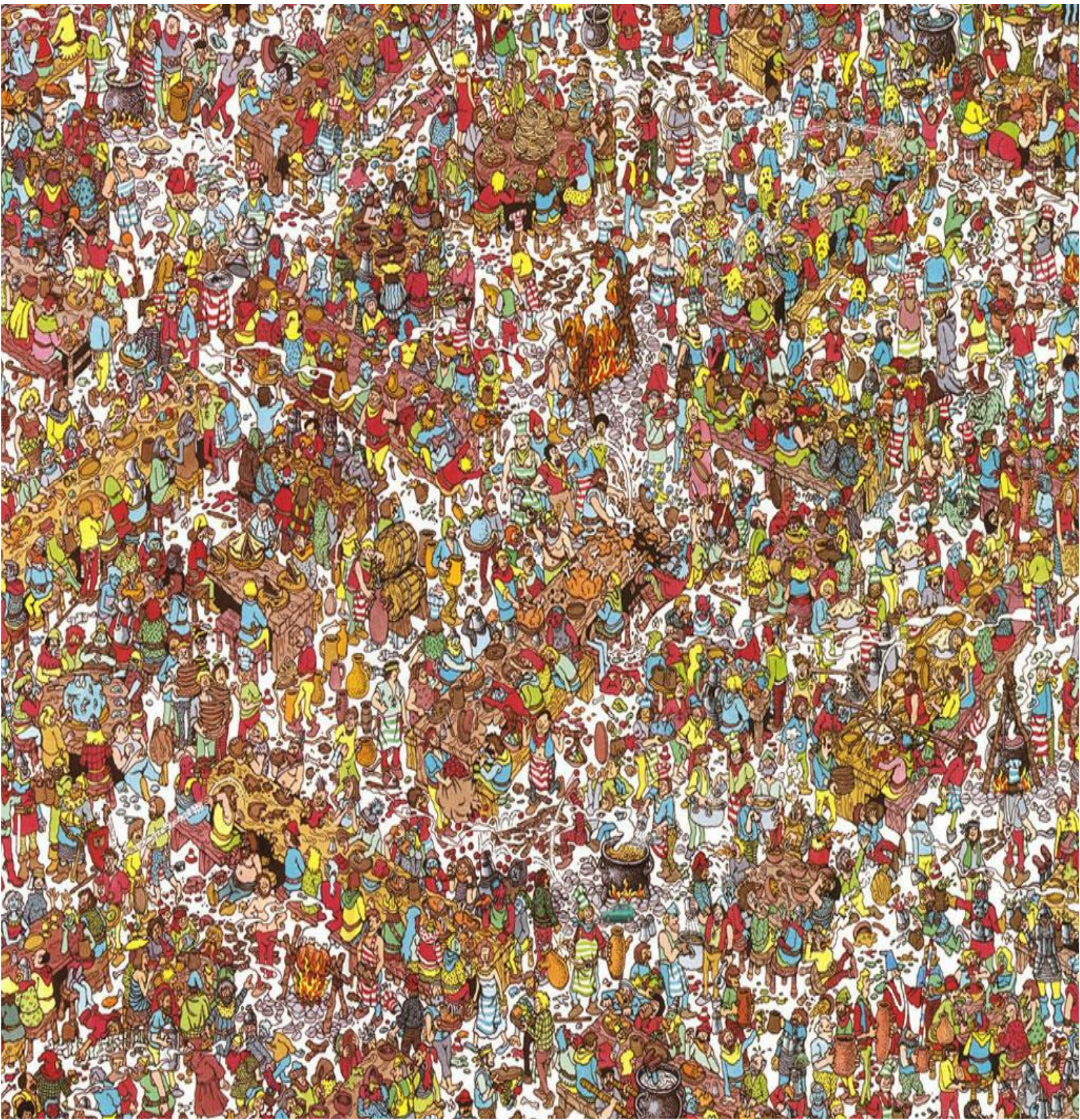
Crack pipe- This is the coolant pipe that goes across the front of the motor, from the water pump housing to the thermostat housing, with a nipple in the center for the oil cooler/heat exchanger. Waste money on a billet one if you really want to. But if you can follow, if your stock plastic one survived 1xx,xxx miles with your previous owner putting garbage coolant in it, why spend \$80 instead of \$8?

15. Ignition System

Spark Plugs- NGK BKR5E.(Or the bosch equivalent Bosch FR8LDC) Dual or single electrode, they both work well. These are the best plugs for these motors imo. They're some of the cheapest as well. If you forget the part number, go into the parts store and say, "Hi, I need 6 of the cheapest copper NGK plugs for a 97 Jetta VR6, please". Even if you have a gti, just say Jetta, and even if you have a 98, just say 97. I've come to understand parts guys.

Plug wires- oem bosch. I like the mk4 wires because of the pull tabs they have. ➡

Take a break from reading and find waldo and a surf green golf sport.



Coilpack- The oem coil pack is great. The general opinion of them is bad as overtime the plastic deteriorates, and cracks, allowing water to get into them. This happens with all vehicles with coil packs, ours cracking isn't unusual. It's just one of those things that you've got to buy sometimes. Many people have been running MSD coil setups. I feel that this is pretty unnecessary. I had an msd setup that I bought off a buddy who was parting his f.i. setup and ran it on my old motor. I would say that the car ran a little smoother, but I don't feel that it added any power. All that, for a hit on reliability. The external wires are going to come off at some point, and leave you on 4 cylinders. Many are having no problems on high hp vrt's in the 500hp range with stock coil packs.

16. Lubrication Oil-Everybody uses everything. It doesn't really matter. Synthetic is basically....synthetic. I run 5w30 Amsoil. Just don't run 20w50, that's stupid.

Filter-I use oem from Germanautoparts. At least you know they're of good quality, and it's actually cheaper than the purulators or whatever you can get at the local parts stores.

Oil pump-I've seen very few fail. If you're having pressure issues, replace it. The biggest thing is to keep the pickup screen from becoming clogged. Parts of timing chain guides tend to come off, and get stuck up in there.

17. Engine Management The VW market is the only one I have ever seen to be so behind on technology. Other makes almost all go to some form of standalone ecu, or chipped/tunable stock ecu as a preliminary modification. Talk to a Honda guy who knows what he's doing sometime....you'll get "You've NEVER tuned your car?". We don't HAVE to, because our mass airflow sensors, as much of a crutch as they can be, allow our ecus to compensate for anything but extreme variances. This lack of tuning has been a long trend as there has never been a large VW performance aftermarket. There are no chipable tuning programs available to us.(such as Hondata) There are many ECU's available to us, however most require a wiring harness to be built, which is a daunting task for many. Lugtronic, I think is one of the best options here. Kevin makes plug and play harnesses for the majority of VW harnesses. Paul made a post after installing Megasquirt: <http://forums.vwvortex.com/zerothread?id=4319986> Which brings me to.....chips. They all work, but I've found GIAC to make the best power. I've run a GIAC non-cam chip on everything from a bone stock motor, to a bolt-on motor, to a 3liter 11:1 compression motor. It has run all of those fairly well, and reliably. Tectonics tuning also makes good chips. C2's chips are cool because they remove the ecu's need for a second o2 sensor, and secondary air injection. However, i have heard that they do not allow misfire codes to be stored. I don't like them....too many issues across the board. →

18. Fuel Run 93. Your stock fuel pump will work for everything but extreme cases. Your stock injectors(19#), will work for everything but extreme cases

Fuel injector cleaner- The absolute best 'dump in' cleaner is B&G 44k. It is a little pricey at \$20 a can, but is the only product that i've seen make a difference. If you really want to get serious, there are some companies such as witchhunter.com that flow, balance, and rebuild injectors. However, aftermarket 19# injectors are so cheap that it might be worth getting those if you're having fueling problems.

19. Transmission/drivetrain This is a weakspot in a vr6 car, but a few small changes make a big difference.

Ring and Pinion: There are multiple ring and pinion options that can be taken from various o2a's to change up the car's gearing. A higher ratio ring and pinion makes for shorter gears. This is the same as changing the rear end gears in a muscle car. The ring is bolted to the differential. It changes the final drive of the transmission. 3.39 and 3.65 are both fairly mild. 3.94 is starting to get a little aggressive, whereas, 4.24 is really short. I'm talkin, start in 2nd short.

3.39-all mk3 vr6's

3.65-Corrado vr6's and some 4cyl o2a's

3.94-Some 4cyl o2a's

4.24-mk4 2liter o2j's and others

Shorter 3rd gear: We have a LOOOOOONG 3rd(1.308) in all mk3 vr6 transmissions. If you go to <http://www.vwtransaxles.com/code.html>, you can find the ratios for all vw transmissions that are important here. This long 3rd makes the 2-3 shift fall a bit further out of powerband than what is best, and makes the 3-4 too far into the powerband. If you swap your 3rd for a 1.345-1.47, i think you'll like it.

Differential: Internally, the weakpoint in an o2a is the stock differential. A differential allows for one wheel to move faster than the other and still have sufficient power given to it. When you go around a corner, the outside wheel moves faster, and your differential is working. The problem with using factory differentials and performance driving is that when one wheel starts spinning, it continues to spin. This applies for straight line traction as well as pulling out of turns and unloading the inside wheel. This also happens to be the part that usually flies out the back of the transmission when it blows up.. Popular LSD, or Limited slip differential replacements such as Quaife, Peloquin, and Autotech are expensive, but will last you forever. When one wheel begins to spin with these differentials, the other wheel continues to get power, limiting spinning. Not necessary, but a must for exceptionally hard driving.

Transmission fluid: 75w90 GL-4 fluids must be used. Best all around, cheap, easy to obtain, is Pennzoil syncromesh. I usually drain this through the 17mm Allen bolt on the rear, bottom of the transmission's differential housing. I fill through the vehicle speed sensor hole at the rear of the top of the transmission. This requires a transmission funnel. The transmission is full when fluid runs out of the 'fill hole' on the front of the transmission, another 17mm allen.

Axles: I like Empi axles, and Mobil 1 grease.➔

Alternative shifter options: The best short shifter for the o2a was the dieselgeek piece. The rest of the shifters on the market are pretty lame imo. Nothing's really wrong with stock. I really like those verdict motorsport bushings.

Mk4 o2j shifter swap: By swapping the shifterbox, cables, and shift tower(in the transmission) from a mk4 5spd car, shifts will be much smoother and precise. Putting the Mk4 shifter box in only requires that a few holes be drilled in the floor, and some extended studs bolted into the box. This is a great shifter, and oem upgrade, and i'm suprised more people don't try it!

Precautionary:

Motormounts: You should run upgraded ones. At least bfi .5 inserts. They don't vibrate at all. Stock mounts allow for too much engine/transmission movement, which is a big cause of drivetrain issues. It also makes the car much nicer to drive and shift.

Transmission brace: Corrado's and early passats came with an extra brace on their transmission, between the back of the case, and the rear trans mount. This should be run on anything that's getting driven aggressively.

A thread i made awhile back: <http://forums.vwvortex.com/zerothread?id=3981073> LET ME KNOW WHAT YALLS THINK. 🚗



MK3

98 Cabrio

When did purchase this car, what year is it and what made you choose this?

I bought this car in early 2010, it was white with a white top, and I paid way to much for it because of the color combo (not knowing I was going to paint it anyways) lol. It's a 1998 Cabrio, and I wanted it because I LOVED MK3's but I still wanted to do something a bit different than what everyone else was doing. Plus riding without a top is just plain fun!



 jared houston

Who helped you to build the car?

First person I'd like to shout for helping with this car is Tyler - my painter / good friend. Without him this car wouldn't even be close to what it is now. Jesse (oralegt - porcelain blue GTI on color matched TH's with peanut butter interior) helped with pretty much everything else. My other good friends Kevin Krugg and Scott Camp have helped a ton on this car as well. Banchwerks as well, helped with the drop plates!

What makes you car special or unique?

It's the only MK3 that is this color, and from my understanding I'm one of the few people to ever run 10's in the rear? Funny story, I was actually unaware that it was a "feat" of sorts until after I did it, and I started realizing people's reactions after learning this. Coming from MK4's 10's in the rear was the norm. lol

How satisfied with the outcome of the car 1-10 point scale 10 being super satisfied? What do you still want to do or change to the car?

Right now I'm about a 6, I love the way it looks, but there are still many many things I'd like to do with the car. Driving static like this is tough on 17's and I've already kinda destroyed my fenders. I'd really like to get the car on air, redo the top, and interior (colors TBD), and I'd like to eventually paint the engine bay the same color as the car.

If your car was an icecream flavor which flavor would it be?

Obvious choice is obvious - cranberry ice cream

What is the furthest trip you have taken with this car and did you have any issues while doing so?

I've taken the car to Orlando. I didn't have too many issues other than a busted coolant line, which a little duct tape took care of. That was a long long trip for me, about 14 hours, and I did it all in one night.

Who do you feel the biggest douchebag on the vortex is?

Easy, Louie Bricants, dude is a straight douche, but I love him.

Anything else you wish to share?

I'd just like to thank everyone for the love they have shown towards me and the car. It's been a pretty exciting year for me this year, with being just purchased a house, and now my son being born, and it really means a lot to me how much support the community has shown me!

MODS

Suspension: basic vmaxx coilovers that were brought over from my MK2, actually have been looking further into air ride for this car. I run banchwerks drop plates in the rear to help cope with my barrels hitting the coilover body. Which actually puts my ET in the rear to +3

Wheels: 17x8 et 20, and 17x10 et 20 fully chrome BBS RF's, wrapped in 205 40 17 and 215 40 17 falken 512's


Exterior: the body - I have a fully shaved front bumper, shaved antenna holes, painted mirror caps, painted door handles, pulled arches, and quarters, shaved third brake light, shaved emblem, and a shaved exhaust cutout. It is fully color changed and has been sprayed that color twice, it's a Cadillac color, I believe it is called deep cranberry red metallic. Door jambs are all sprayed as well.





 **jared houston**



 **jared houston**



 **jared houston**



 **jared houston**







 **jordan houston**

fortyfour

