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Passat - All Other Models



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izzo
Member

[VR6 Water Pump DIY + Tensioner Greasing \[12v B3\]](#)

[<<](#) [>>](#) 10:41 AM 7-18-2004

[Reply](#)



did it a few weeks ago already, but just got the time to write it down. on a VR6 engine 12V '94 year...

Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI



first of all, cheapest water pump i could find was on <http://ecstuning.com> - like forty-some dollars, and a nice one too... btw, when i called them and the guy asked me what car i will be shopping for, and when i said B3 '94, he was like: "woooooow, ooold skoooool, uuuuh" - as if i was driving a what, fred flintstone's car? dude, i seriously doubt if u drive phaeton '05 W12!!! okay, whatever....



second, read all u can about this procedure and even print it and read it again, what is i did 😊 do a good research on coolant as well, there is a lot of info around so i will not discuss...buy some tools and patience... the coolant i got is also from ecstuning, PENTOSIN, from what i understood is the OEM \$hit they use and best 4 ur cars, so...

to begin. the PITA here is to get the pump out of the engine body. but we'll get there. first of all my a/c compressor is removed and this gives a little bit of clearance to work. then i removed engine plastic covers, air filter box and belt tensioner which i succeeded to break btw [but still fully operational thank god] - easy enuff.



a word about the tensioner, now is a good time to grease it as on pictures below, mine was dry as hell, and screeching, so i removed the pulley [be aware - it is reverse thread] and took it out,



btw it is easier to remove it WHILE BOLTED ON ENGINE cuz u will have support to unscrew it! aait...



there are two like round caps on both sides,



pry with a ver thin screwdriver and make sure not to damage those, they're thin...
put as much high temp grease - \$2 anywhere pretty much, stuff as much as u can fit
inside... clean all around, wipe, put two caps on, wipe again, fasten to tensioner body



while it is still on engine being hold by the three bolts and then remove the tensioner itself to continue with the water pump....





by this time i had the car front on jack stands an battery unplugged, just in any case, caution is always a plus... btw i been always hating to stick myself under any vehicle, especially when it is lifted only with a jack, so i got myself those MACK stands for like nine dollars, now i feel even comfortable under the chassis... further on i even removed the passenger front wheel and the front lower spoiler lip which i used the moment to clean and refresh with paint btw now loox awesome.....

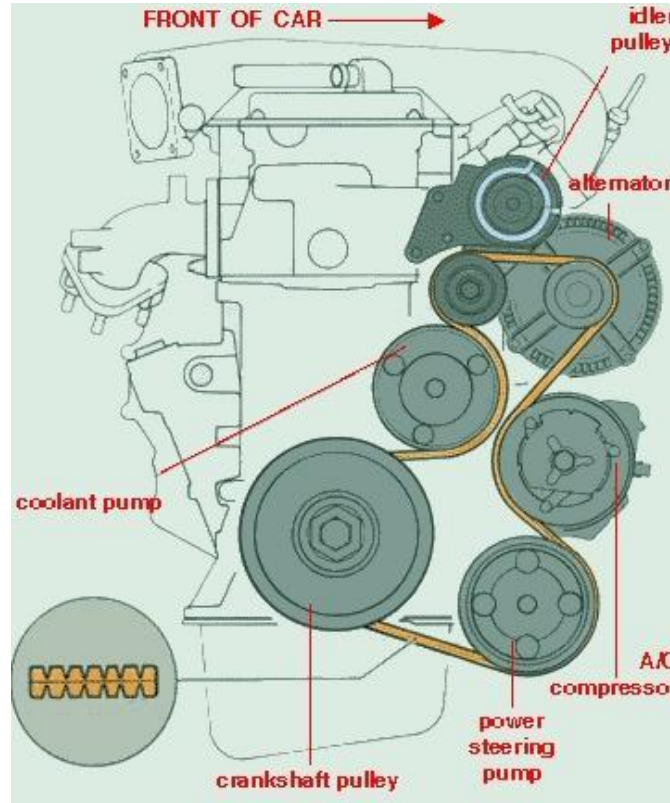
we getting to it... once u drop the tensioner, remove the accessory belt, might be a little problem around the biggest pulley down there at bottom engine - the crank pulley, but should not take more than few minutes. now that everything else is out of the way, figures out YOUR CAR CHASSIS is on your way, at least on the B3 - meaning, the three bolts that hold the pulley to the water pump body were so stuck, so my only way was to remove the whole thing @ once, HOWEVER the car chassis is on the way

it comes out of the engine!!!! so after removing the three bolts that are holding the water pump body to the engine my worst fear came through - i had to trick the engine somehow... btw to loose those three bolts i just rolled the water pump pulley till the holes on it come on top of the bolt heads and then take them out...ait...



4 sum reason in my case those happened to come out easier than the pulley bolts...!!! for ur reference here is like what it looks on the side, the way of the accessory belt i

mean:

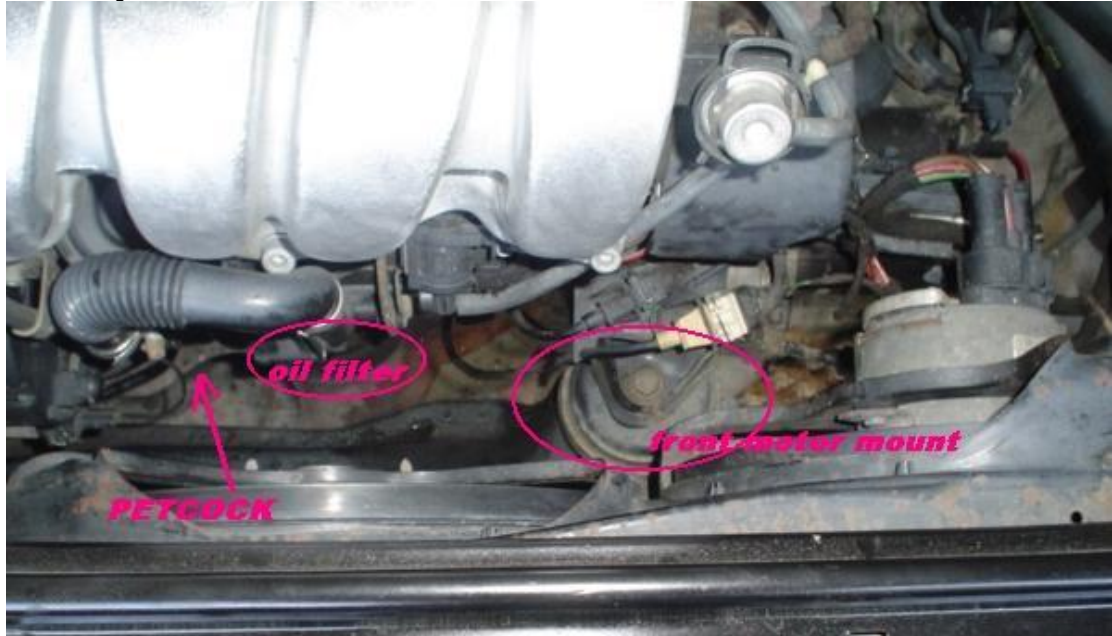


then i started reading that people unhook their engines and take them out, that they unmount the cats and exhausts, remove engine mounts and stuff in order to take the water pump out on this particular VR6...



heeeel no, i am do-it-yourself-er, however ain't no way i am taking the engine out, by pulling it up or tilting it to the side...naah... started thinking and came out to be pretty easy, by following the logic.... i just needed da engine to lift up like two to three inches on the passenger side,

so..... i just loosened the FRONT motor mount behind the radiator



AND the rear motor mount below the intake elbow, NUTTIN ELSE cuz i just feared it-



the mount on top of the tranny u just leave like i is to hold yo VR6, and i did not even touch them exhaust pipez... just loosened the bolts on them two mounts without even taking them out....

THEN my problem was how to pull the engine out.... i aint got anything or anyone to help me

with that, so a recent oil change trip to the local VW shop popped in my mind..... being there together for a oil change @ da same time with a friend of mine, he riding on a Jetta 99.5 2.s10, both cars were in the air for the oil to drain, and the mechanic told me: u c yo friend's oilpan? yeah i said... he asked me, u c yourz? hell yeah i said.... well,. he said, u c that huge scratch on your 94 pan? if that hit was on his 99 jetta it would've blew his ALUMINUM oil pan, but your IS PURE FREKKIN steel and that is why it is FINE... and 4 real,

on my oil pan on the front side there is a big scratch that is even hollow - like three inches long, apparently 'twas a HIT...w/o any harm thank god!

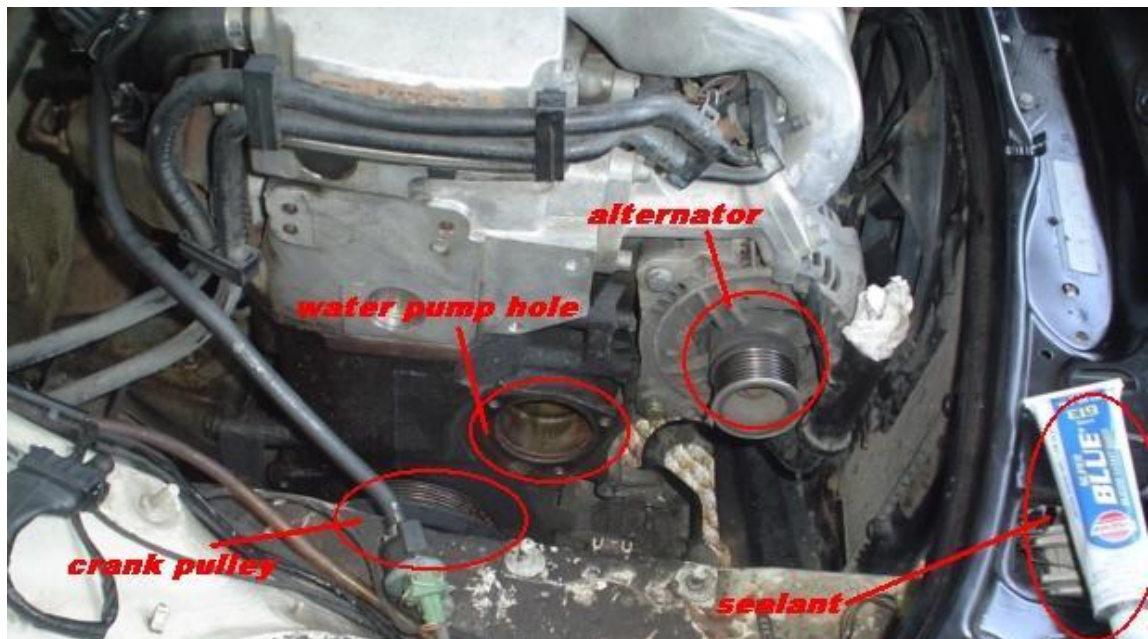
SO!!! what i did, just took a piece of wood and held it on the bottom of the oil pan,



and stuck the car jack underneath it and started lifting..... see below how engine tilted???



not a problem @ all, however i just kept it raised and tilted till i removed the water pump,



and then brought it down till time comez to put it back in. btw had to pry the darn pump out, was so like welded to the engine block!!!!!! anyways, below is a pic of the old one and the new water pump. make sure the new one comes with a rubber sealing



O-ring, but to insure myself i bought a tube of salant as seen on pic!!!

by now u should've flushed ALL the coolant u had inside, for this purpose i unclamped



the bottom radiator hose AND opened the coolant tank cap to release the pressure if is any

left after dropping the water pump out, as well as you need to find THE PETCOCK-



a small cap that is hard to find, i hopez pic below will help...

it is situated when u lay underneath the front of car, between engine bottom front and oil filter housing, this on the pic is the looong screwdriver i used to unscrew the petcock, be careful not to damage it cuz it is plastic! and make sure collant won't spill all over you, as well as make sure u dispose of it properly.

then i put the waterhose in the coolant tank and let it flow and flow and flow till clear water [almost!] came from petcock hole.....

then i let everything dry and put the sealant and the o-ring on the new water pump, jacked engine up again and put it the new pump, fits perfectly, as it should... tightened the three bolts, pulley was already on, now something to mention,,,



i guess bentley has the tightening specs, i never had one so i just tightened only trusting my arm - as much as i could, i tightened... knock on wood,

no problems so far and it's been already a month intensive driving, and i am not loosing coolant nowhere!!! then when u make sure u got the water pump on, and well put on, drop engine, fasten the two motor mounts VERY WELL!!!!!!!!!!!!!!VERY WELL!!!

put on accessory belt, put on belt tensioner, drop in the airbox, might as well to clean the airbox inside and the throttle elbow and body which i did as well.....

connect all cables and hoses, tighten everything securely AND FILL YOUR COOLING SYSTEM entirely with tap water.... let car run for a few minutes till it reaches operating temperature, AND FLUSH EVERYTHING COMPLETELY in a few minutes

after car cools down, be carefull cuz what will came out is old cooland messed with water and is HOT>>>LIKE>>>HELL!!!! not to sound paranoic, but i think i did that procedure about ten times till clear water came out at last...at a point i even had the car running - idling, not driving it around of course with water in it, and i had the hose with water flowing stuck in the coolant tank AND the petcock removed...

for a few minutes thought, did not want to risk it.....

main purpose of all that cycling is all the threads and threats i read about NOT to mix old coolant with new.....

THEN after i was satisfied with the result i poured one bottle of PENTOSIN in the coolant tank,

after letting the system dry completely, and filled that bottle with DISTILLED water and poured it in... took like three bottles and a half i think, mixed FIFTY / FIFTY with DISTILLED water.... sum ppl say mix it 60-40, i just did half2half.....

later on i added almost a whole bottle of WATER WETTER, and maybe cuz of that my car never reached 180 degrees, or maybe cuz my a/c condenser is removed and now radiator is by itself and cools better, dunno... fact is it never hits 180F!

then i started car and having in mind i have not driven it in three days, i just RAPED it, went home then, left it 2 cool down, opened coolant tank cap and topped the mixture inside... to be honest, i had a bottle of ready 50-50 pentosin-distilled water mixture in the trunk while driving about a week after that, however i did not had to top it off @ all!!!!!!



almost done here 😊

well, basically this is the whole drill, took me like three days to finish, but i work slowly and spent like only two hours a day, with no repair manual, and besides i noticed two things: second rear motor mount - on top of tranny- is busted, leaks gel, will replace asap as i get the whole set... and oil cooler seals are bad, due to be fixed on next oil change... hope this would help sum1, but do not quote me, whatever u do ppl on your car izz 4 yoself...

Modified by izzo at 10:09 PM 3-13-2006

Modified by izzo at 10:11 PM 3-13-2006

VWbay

Es ist wirklich eine Liebe - hassen Sie Verhältnis! 

jbrams
Member

 Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) [»](#)

[«](#) [»](#) 2:00 PM 7-18-2004

[Reply](#)



Offline

Member Since
1-22-2004
1398 posts

Berkeley CA
1995 VW Passat
GLX

Let me be thr first to say, nice job and great write up!
Thanks!
Abe

<http://www.vdubaddiction.com/members/jbrams/> 



Bleifrei
Member

 Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (jbrams) [»](#)

[«](#) [»](#) 4:39 PM 7-18-2004

[Reply](#)



Offline

Member Since
3-22-2003
224 posts

Kitchener ON
2k5 Jetta GLS
TDI, '95 Passat
VR6

good job! (oh and nice shiny intake )

Bleifrei
Once you go TDI...



VR6_MAN
Member

 Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) [»](#)

[«](#) [»](#) 6:40 PM 7-18-2004

[Reply](#)

SUBARU

Quote, originally posted by izzo »

to begin. the PITA here is to get the pump out of the engine body. but we'll get there.
first of all my a/c compressor is removed and this gives a little bit of clearance to work.

Offline

Member Since
12-11-2003
1125 posts

Rochester Hills
MI
2007 Subaru
Impreza / 1993
Passat GLX
(VR6)

Why, I did mine the same way, but without removing the a/c comprssor. Also, I fabbed up two studs that i replaced the motor mount bolts with, It was easier then trying line everything up again. (It was the third time I did the job, turns out regular coolant kills your pump[seals)



Quote, originally posted by Jeremy Clarkson »

If you stop and think for a moment, how can it take two years to build 14 miles of road? The Romans could do 10 times better than that 2,400 years ago.

izzo
Member

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (VR6_MAN) >><<>> 8:19 PM 7-18-2004

Reply



Online

Quote, originally posted by VR6_MAN »

Why, I did mine the same way, but without removing the a/c comprssor.

Member Since
3-18-2004
5473 posts

i did not remove the a/c compressor especially when changing the water pump 😊 what i meant is that it was removed a few months ago cuz went bad, and i deleted the whole a/c system, that just eased the water pump change 😊 however i am planning on restoring the a/c system as soon as i get my hands on a cheap compressor.....

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI

[VWbay](#)



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VR6_MAN
Member

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >>

<<>> 4:41 AM 7-19-2004

Reply

SUBARU

Oh, well I miss understood. Sorry I said anything. I applaud your use of SuperTech products. For those prices you can't go wrong. To bad they don't have filters for our VRs.

Offline

Modified by VR6_MAN at 10:43 PM 7-18-2004

Member Since
12-11-2003
1125 posts

Rochester Hills
MI
2007 Subaru
Impreza / 1993
Passat GLX
(VR6)

Quote, originally posted by Jeremy Clarkson »

If you stop and think for a moment, how can it take two years to build 14 miles of road? The Romans could do 10 times better than that 2,400 years ago.



izzo

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (VR6_MAN) >><<>> 5:18 AM 7-19-2004

Reply



Member



Online

Member Since
3-18-2004
5473 postswe cool 🍷
appreciate the post tho 😊W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI[VWbay](#)[Es ist wirklich eine Liebe - lassen Sie Verhältnis!](#) **A2B4guy**
Member

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >>

<< >> 6:09 AM 7-19-2004

[Reply](#)

Real nice job with the pics. 👍

Offline

Member Since
12-18-2002
7481 postswasting away
in Gaston
County, NC
95 Psot

I'd like to add something. You had the same problem I did with the pulley bolts. Except the first one I tried stripped out the allen head. So I had to take the pump out with the pulley on it also. What I later learned with more searching is that this is how they usually are. To avoid stripping them, make sure your hex bit fits well and then hit the bar with some force to pop it loose, rather than pull on the bar steadily. It strips out more easily than it loosens, so if you don't hit it hard enough it won't loosen but will strip out. Once I had the pump in the vice it was no sweat.



The real problem is that the engine had to be jacked up higher to get the pump bolts out with the pulley on it, due to the socket wrench fittings. This put a strain on the exhaust and broke loose the spot welds that hold the center pipe into the suitcase muffler. After it was all over I had a new rattle. I looked underneath and the suitcase muffler was hanging low on the right side and the tailpipe hanger had come off. I could swivel the whole thing around by hand. It is still that way until I replace my exhaust I guess. So that is why some folks encourage disconnecting the exhaust flange.

.: Jeff

New mk4 and mk5 stuff!*I build custom wiring harnesses for VW's, specializing in performance lighting eurowires dot net***izzo**
Member

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (A2B4guy) >> << >> 7:34 AM 7-19-2004

[Reply](#)

Online

Member Since
3-18-2004
5473 posts

yeah, i read a lot about loosening the exhaust also, but was not certain i want to do that, so just loosened both motor mounts...

W Va
94 B3 GLX, 97
GTI, 84 Rabbit

guess i was just lucky enuff not to brake it.... 👍

but yeah, if one can take the pulley out first it will be a lot easier to change the water pump, and less will have the engine to be jacked up...

GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI

this i did not do, but besides that - everything went well...
WD-40, A LOT OF IT! 🇩🇪



[VWbay](#)

[Es ist wirklich eine Liebe - hassen Sie Verhältnis!](#)

trixrabite
Member



Offline

Member Since
11-29-2003
567 posts

Los Angeles CA
1997
Volkswagen
Passat Sedan,
1995
Volkswagen
Golf III 40th CE

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >

<< >> 1:33 PM 7-19-2004

Reply

wow I wonder what ECStuning would say if I called up telling them I need parts for my
92 B3 GL...

Volkswagen: Drivers Wanted? more like Parts Wanted! 🇩🇪



izzo
Member



Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (trixrabite) ><> 9:54 PM 7-19-2004

Reply



dunno 🤔

[VWbay](#)

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onthepath
Member

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (jbrams) >

<< >> 9:33 PM 6-12-2005

Reply

Offline

Member Since
4-9-2005
47 posts

Colorado
Springs CO
1995 Passat
GLX VR6
WAGON

NICE write up with pics! and Inspiration...but let me add something in case others
choose to follow...You said you used TAP water to flush...you should really flush with
DISTILLED water about 8-10 time until clear...its tedious, but is save your lovely new
waterpump and/or radiator from getting mineral deposits!

and your car SHOULD be running about 200F. Not 180F. Your thermostat sounds like its
stuck open. The engine was engineered to run at 200F and likes it that way.







BUT if you do the THERMOSTAT, please post the same graphic description for people
because THAT one is a nightmare....



I just redid EVERYTHING in my cooling system. Both Pumps, Radiator, All hoses, Oil Cooler, Thermostat and housing, all o-rings, you name it...I replaced it....when you do the thermostat you will see WHY...when you get that far into the rabbit hole, you might as well....



Did you use the Pentosin G12 (purple)? Its what is suppose to replace the factory G11. And did you replace the serpentine belt when you replaced the tensioner and water pump?

I redid my engine mounts when I did my waterpump because they tend to go on these cars. Lots of torque! I already had my car hung to do the pump, so it made sense to me....I was too scared off my the BOLD FACED warnings about supporting the engine from below...so I rented the hoist....

your car looks nice and clean and congrats on a tough job....    

izzo
Member

 Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3]
(onthepath) 

  11:13 PM
6-12-2005

Reply





Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI



Thanks for the kind words and tips 
Unfortunately, I had an unpleasant accident just the other day;
result - right headlight, hood, radiator leaking...

Anyhow, it was about time for a flush again 

I replaced the accessory belt right after I bought the car in Feb '04.

Along with the rest, now I will redo the above + new coolant, belt, what-fukkin-ever....

When I have the time and money to. Currently I am driving the GTI since it has A/C that can scare the polar bears  And weather in central Virginia is HOT.

But I am on the look for an ool old Rabbit or Golf diesel as a temporary beater.

Oh, and by the way:

<http://forums.vwvortex.com/zer...28221>



[VWbay](#)





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91 16V

 Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) 

  1:14 AM 7-31-2005

Reply

Just used this write up to change the water pump and all plastic parts (upgraded to metal crack pipe) on my 1991 Jetta with a 1996 Passat VR6 installed in it. Thanks a ton izzo, it really helped!    

Jetta

Member



Offline

Member Since
12-6-1999
1564 posts

Valios Back
Yard



izzo

Member



Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (91 16V Jetta) >>

<< >> 2:24 AM 7-31-2005 [Reply](#)

Glad it helped!

[VWbay](#)

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izzo

Member



Online

Member Since
3-18-2004
5473 posts



W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >>

<< >> 7:12 PM 8-2-2005 [Reply](#)

[VWbay](#)

Es ist wirklich eine Liebe - hassen Sie Verhältnis!



B4Passat

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >>

<< >> 5:17 PM 8-4-2005 [Reply](#)

Member



Offline

Member Since
4-27-2004
137 posts

D.C. District of
Columbia
1997 Passat
GLX VR6



Good write-up.....but hmmm ever thought of cleaning your engine?

Proud Owner of a VW

izzo
Member



Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI



Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (B4Passat) >> << >> 1:37 AM 8-5-2005 [Reply](#)

Quote, originally posted by B4Passat »

Good write-up.....but hmmm ever thought of cleaning your engine?

?

[VWbay](#)

Es ist wirklich eine Liebe - hassen Sie Verhältnis!

izzo
Member



Online

Member Since
3-18-2004
5473 posts

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI



Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (VR6_MAN) >> << >> 5:36 AM 8-8-2005 [Reply](#)

[VWbay](#)

Es ist wirklich eine Liebe - hassen Sie Verhältnis!

aceperry
Member



Offline

Member Since
8-2-2006

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >> << >> 10:10 AM 1-8-2007 [Reply](#)

Hey, I just did my water pump based on your DIY. Great stuff, thanks, but I should've read the bentley before doing anything, duh. Anyway, for completeness, the Bentley states that the pulley bolts torque to 18 ft-lbs, and the bolts for the pump to engine is 15 ft-lbs. I probably tightened it too much, but not enough to strip or write home about.

101 posts

San Jose CA
1996 VW Passat
GLX VR6, 1994
Ford Ranger



Another thing, I bought a Graf water pump with the metal impeller, and the instructions said, "don't use sealant if the pump has a gasket." Well I used sealant anyway. 😊
Funny thing is, on an 85k motor, the pump was in fairly good condition, tight feeling seal, and at first I thought the impeller was metal, it was that good looking. Oh well, at least I have one less worry. 🍷

izzo

Member



Online

Member Since
3-18-2004
5473 posts

Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (aceperry) >> << >> 1:09 PM 1-8-2007 [Reply](#)

Glad it helped you.

W Va
94 B3 GLX, 97
GTI, 84 Rabbit
GTI, 06 Citroen
C5 HDI, 00
Audi A4 1.8TQ,
93 Audi B3 TDI



[VWbay](#)

[Es ist wirklich eine Liebe - hassen Sie Verhältnis!](#)

vwnut18t

Member



Offline

Member Since
6-5-2004
2247 posts

gilbert az
01' JTi
1.8T(sold), 01'
Jetta
VR6(sold), 96'
#14 of 200
Harlequin
Golf(sold), 91'
GTi vr6, 07'
Rabbi



Re: VR6 Water Pump DIY + Tensioner Greasing [12v B3] (izzo) >> << >> 10:30 PM 1-19-2007 [Reply](#)

Nice write up 👍 I have to do my pump soon as preventative maint. My issue is that the vr is in a mkII Gti... There really isnt any space. 😊 Oh well, I will figure it out. This write up definitely gave me a good visual so now I feel comfy in my abilities so I can embark on this adventure(this is my first VR so my learning curve at this point is straight up 🍷)

Imagination is more important than knowledge.
-Albert Einstein

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Passat - All Other Models 6

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