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#### Do-It-Yourself H.Q.

Share your DIY projects or ask questions about how to fix something on your own. Help fellow Bimmerfest members improve your wrench turning skills! All BMW DIY tips, tales, and projects discussed inside. Learn to work on your car and know the right BMW parts you will need!



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#1

04-21-2010, 12:13 PM Axion\_E46

Registered User Location: Paso Robles, Ca

Join Date: May 2009 Posts: 24

Mein auto: 545i, 01 740i Sport View My Garage

# 545i N62 Water Pump/Pulley Replacement DIY

Recently my car started making a rattling grinding noise. After removing the belt and hand spinning all items I found that the bearings in my water pump and both the tensioner and idler pulley were all failing (also found vacuum pump to be leaking). Car has 130k on it and everything appeared original. Since I have already replaced the rotors, pads, break fluid, battery, upper & lower control arms, inner & out tie rods, I decided to take on this project myself as it seemed straight forward and I have access to nearly every tool imaginable 🕲

I thought I'd share my experience, pictures, frustration. Unfortunately due to very greasy hands and time, I wasn't able to take pictures of every step.

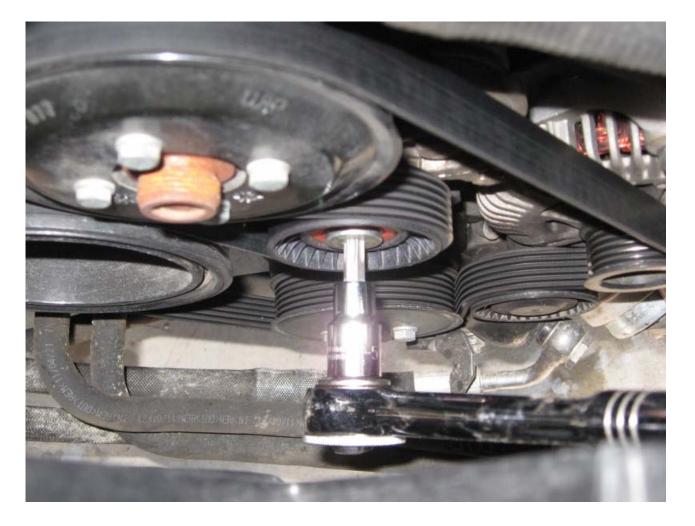
Removed skid plate

7/24/2012 4:08 PM 1 of 24

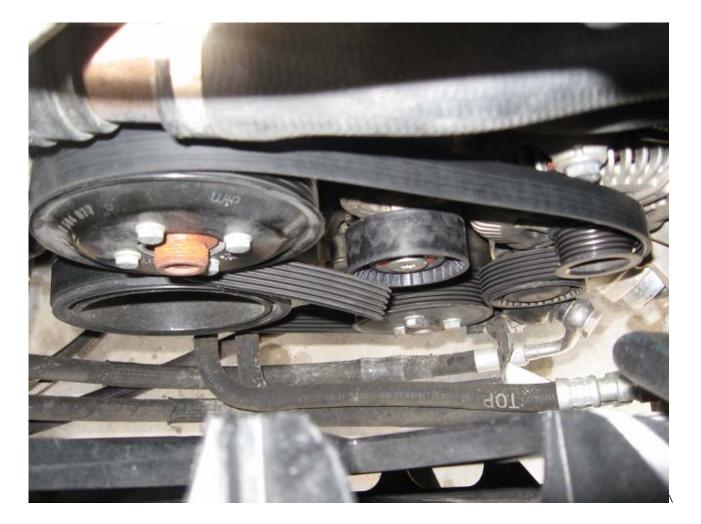




Removed pulley dust cap. Released tension.



Removed belt.



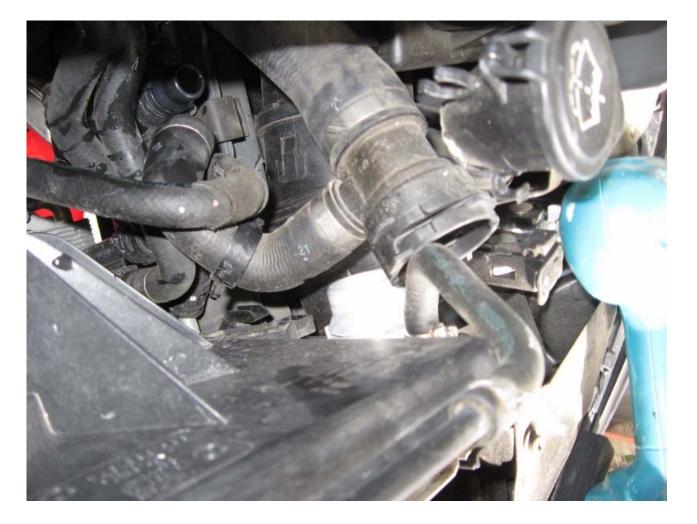
Removed radiator cover.



Disconnected hoses.



More hoses.



Removed fan.



Removed all pump hoses. 4 in total I believe.



Removed water pump pulley.



What possessed anyone to put 1 bold underneath the main engine pulley is beyond me.



Everythings out finally.



Transplanted thermostat to the new water pump with new seals.



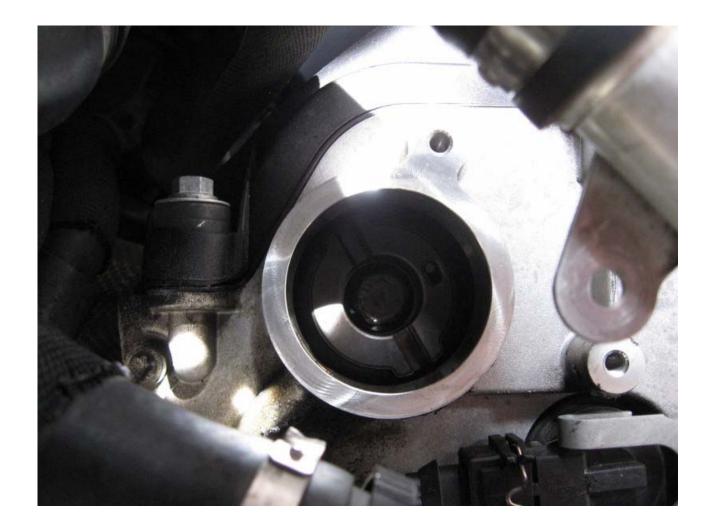
Here's where everything went wrong. Upon removing the water pump, this tube (next picture) is recessed and only the very end is visible. Being a new seal for this opening was included with the water pump I assumed the old seal was just stuck on. Big mistake, it was part of the tube... had to leave the car apart for nearly a week waiting for a replacement.





Since I had everything apart this far I decided to tackle the leaking  $\underline{\text{oil}}$  pump.







After searching around, I found a bearing and hydraulic shop that had a new seal for the front cover of the pump. I took the pump apart and cleaned all components with  $\underline{gas}$ , dried then reassembled. I also replaced to vacuum tube that attaches to the front of the pump.









This project ended up costing around \$180 total (rebuilt water pump was cheap). 2000 miles and a good engine bay cleaning later everything is working great, with the exception of the vacuum pump which is now leaking from the large pressure fitted nipple. Guess I'll be replacing it after all (\$400+).

Hope you enjoyed reading my first thread!

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05-31-2010, 01:03 AM #2

# mfumbesi 🕥 Officially Welcomed to the 'Fest

Location: Pretoria SA

Join Date: Oct 2009 Posts: 370 Mein auto: E46 323i, E60 545i View My Garage

Thanks for the write up.

I have a leaking Vent Hose (small pipe on top of the radiator, connecting the expansion tank) and the radiator cap is damaged. I am even scared to ask if my pump will be damaged by the radiator cap shredding.



■ 08-01-2011, 06:37 AM #3

top6491 🕥 Registered User

Location: San Diego

Join Date: Mar 2005 Posts: 6 Mein auto: 2005 Metallic 545i View My Garage

# Vacuum Pump Replacement results

Quote:

## Originally Posted by Axion\_E46 [2]

This project ended up costing around \$180 total (rebuilt water pump was cheap).

2000 miles and a good engine bay cleaning later everything is working great, with the exception of the vacuum pump which is now leaking from the large pressure fitted nipple. Guess I'll be replacing it after all (\$400+).

Hope you enjoyed reading my first thread!

Did you replace your vacuum pump? How did it go? Where is it located? Thanks...



01-27-2012, 04:42 AM #4

mfumbesi 🕥 Officially Welcomed to the 'Fest Location: Pretoria SA

Join Date: Oct 2009 Posts: 370

Mein auto: E46 323i, E60 545i View My Garage

I'm going to be tackling the water pump replacement this week-end. I would like to find-out why you had to remove the bottom cover. It wasn't in your way. Was it just for cleaning?

Quote

#5

01-27-2012, 09:25 AM

Axion\_E46 Registered User Location: Paso Robles, Ca Join Date: May 2009 Mein auto: 545i, 01 740i Sport View My Garage

It's not necessary. It was mostly just for cleaning. I've since done the same procedure on an E38 without jacking it up. Happy wrenching.

#### Quote:

### Originally Posted by mfumbesi D

I'm going to be tackling the water pump replacement this week-end. I would like to find-out why you had to remove the bottom cover. It wasn't in your way. Was it just for cleaning?







01-30-2012, 12:26 AM

# mfumbesi Officially Welcomed to the 'Fest

Officially Welcomed to the 'Fes Location: Pretoria SA #6

Join Date: Oct 2009 Posts: 370

Mein auto: E46 323i, E60 545i

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Quote:

## Originally Posted by Axion\_E46 <a>\int\_</a>

It's not necessary. It was mostly just for cleaning. I've since done the same procedure on an E38 without jacking it up. Happy wrenching.

Thanks for the well wishes.

I've already tackled my water pump on Saturday (28 Jan), again thanks for this thread. 🚜

I was also swearing when I saw the hidden bolt, I only loosened (didn't completely pull it out as you, was a bit scared about re-assembling it without any way of adjusting the tension) the bottom pulley to get access and space.



■ 05-05-2012, 08:03 PM

thorsond81

Registered User Location: Iowa #**7**Join Date: May 2012

Posts: 1 Mein auto: 2004 545i Sport Package <u>View My Garage</u>

# Waterpump fun

So I just purchased my 2004 545i on Tuesday and after <u>driving</u> about 10 miles I blew the radiator hose off of the radiator. I had test driven it (pretty hard) twice and heard nothing and had no issues. The car was babied by the previous owner, only 64k miles on it

Anyways, after all of that ordeal I got the hose on and clamped and started hearing squealing. Thought it was only coolant on the belt but after the same investigations you did, I have found the water pump is loose and squeaky. Needless to say I am glad to see this is possible to DIY. I have quite a bit of experience fixing <u>cars</u> but mostly older models. Nothing as advanced as this car.

I appreciate the blog, but I do have one question. I am about to order all of the parts needed, do I need to order another tube like the one you were talking about? Did you get a rebuilt pump?

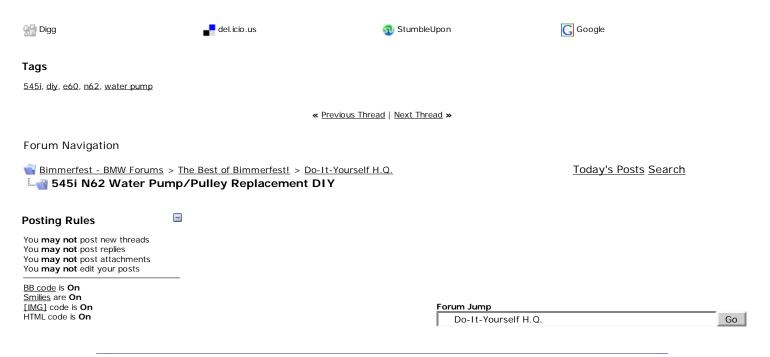
Thanks again.





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All times are GMT -7. The time now is 04:06 PM.

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