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48 volt wind generator

By PRedATor, Section Wind
Posted on Mon Apr 4th, 2005 at 10:57:25 AM MST

48v wind gen, am I on the right track?

14" rotors with 12 36mm x 50mm x 10mm neo mags

10 of 0.8mm 270 turn coils

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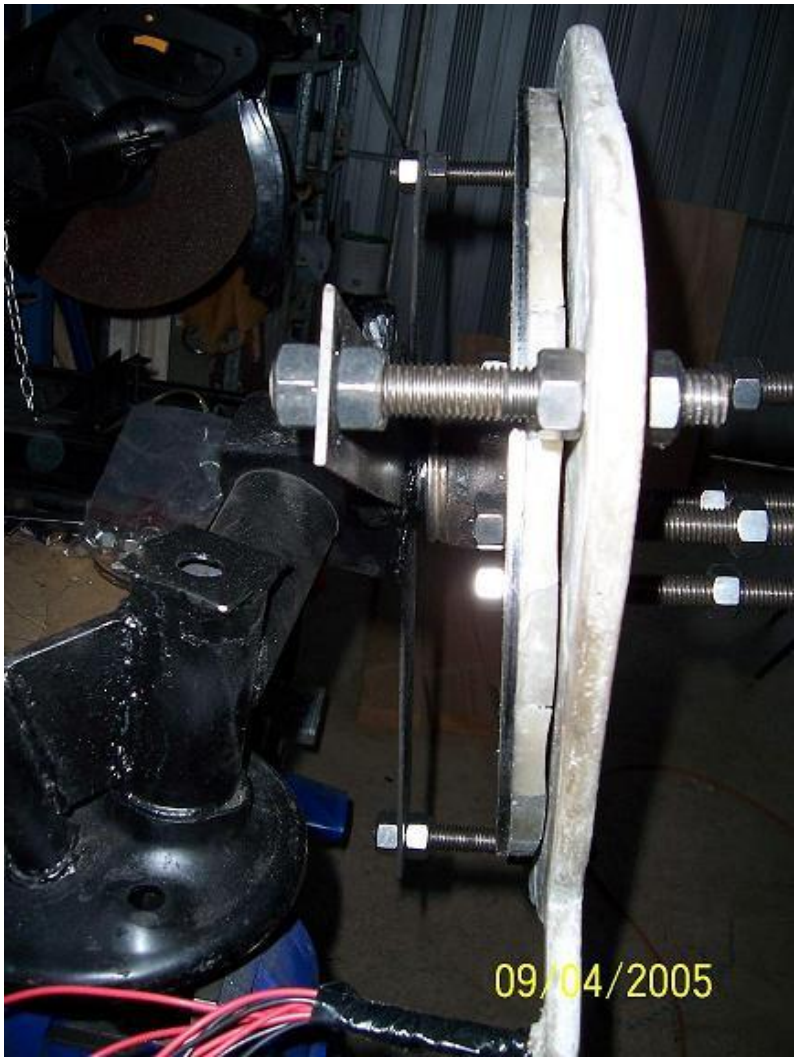

turning by hand at 2 rev a sec (120rpm) I get a reading of around 4volts unloaded with just the rear rotor on. Thats just connected on two of the wires from two coils coming out of the stator as it has a ring of neutral.

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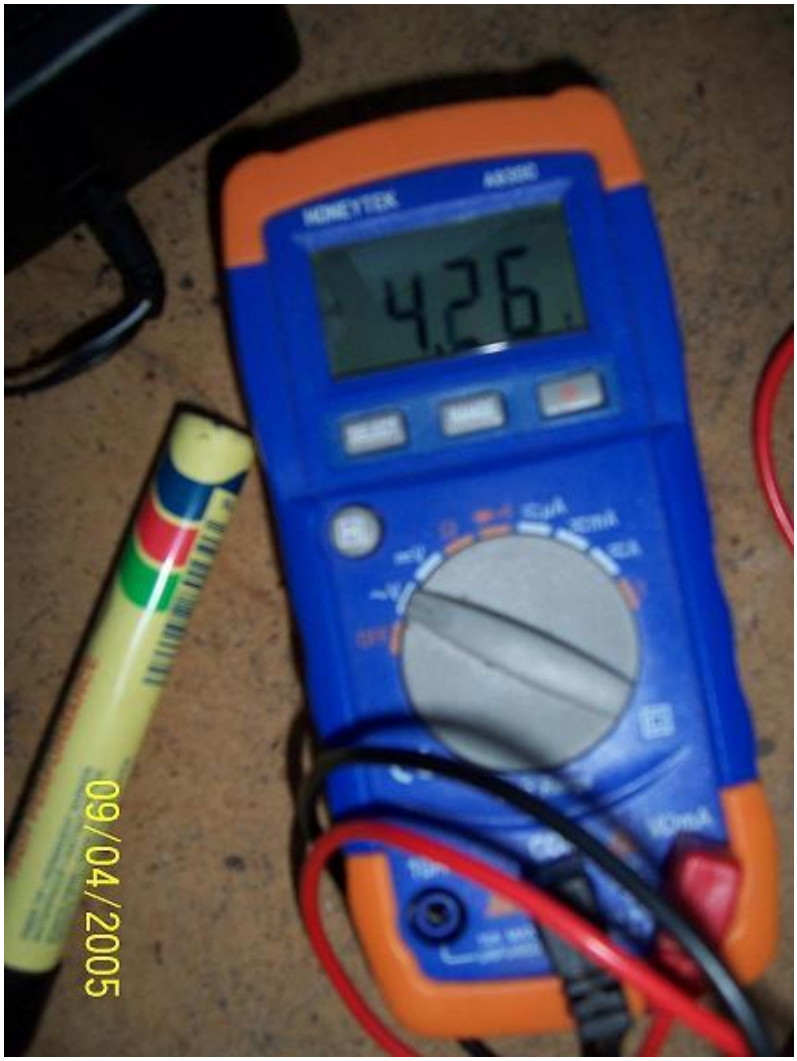

My half carved 5 foot blades for a 10' machine

From hughes book but with some mods as I didn't want to buys more bits.
Does this project look ok for now and any suggestions or questions

Regards

Rich

48 volt wind generator | **18** comments (18 topical, 0 editorial)

Re: 48 volt wind generator (3.00 / 0) (#1)

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by zubbly on Mon Apr 4th, 2005 at 05:24:43 AM MST (User Info)

Hi Rich!

looks like its a great unit. I am a little puzzled though. I notice 12 mags, but 10 coils. I don't recall this arrangement. Maybe its just me. usually you see 12 mags and 9 coils.

have fun!

zubbly

Re: 48 volt wind generator (3.00 / 0) (#2)
by PRedATor (clothchaspy@yahoo.com) on Mon Apr 4th, 2005 at 05:51:05 AM MST (User Info)

Hi Zubbly,

Its 5 phase instead of 3 phase, thus the 10 coils, 2 for each phase.

cheers

Rich

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#4)
by Flux on Mon Apr 4th, 2005 at 06:14:27 AM MST (User Info)

Looks great, get the second rotor on and check the volts again. I have a feeling that it may be a little fast for 10ft blades at 48v. All depend on how it behaves with the second rotor.

From your figures it looks to be heading for 24v. What magnets have you used?

Flux

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#5)
by Flux on Mon Apr 4th, 2005 at 06:27:51 AM MST (User Info)

Sorry, you did give the magnet size. That should work out for 48v as long as your stator is not more than 14 to 15 mm thick. Try the second rotor, it usually doubles the volts but in this case it ought to do better, your stator must be significantly thicker than the 10mm of the magnets.

Should make a really nice machine. Keep us posted on the results.

Flux

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#6)
by PRedATor (clothchaspy@yahoo.com) on Mon Apr 4th, 2005 at 07:21:17 AM MST (User Info)

Hi Flux,

The stator is 13mm thick with the back rotor about 1mm - 1.5mm gap from it.

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I'm quite anxious about how I'm going to put the front rotor on without it slamming down, getting it all square, the nuts all the same distance etc as once its on It'll be hard to get off and adjust.
Any ideas

cheers

rich

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#7)
by DanB (danb@*no spam*otherpower.com) on Mon Apr 4th, 2005 at 07:29:38 AM MST
(User Info) http://www.otherpower.com/

you really should have 3 or 4 jacking screws. (drill and tap 3 or 4 holes in the front rotor so you can lower it down/raise it off safely).

Looks super! Be fun to see it finished/hear the results.

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#8)
by PRedATor (clothchaspy@yahoo.com) on Mon Apr 4th, 2005 at 07:35:38 AM MST
(User Info)

Hi DanB,

That was a quick reply heh!

What size tap do you recommend? I'll do 3 (less holes :))

rich

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#9)
by DanB (danb@*no spam*otherpower.com) on Mon Apr 4th, 2005 at 07:44:39 AM MST
(User Info) http://www.otherpower.com/

If your in 'metric land'... I wouldn't know.
Here I use 1/2" - 13 - the same stuff you made the 5 studs from would be good.
if your very patient... and put an almost 90 deg 'bend' in a wrench - you can lower it safely and raise it off by poking a wrench through the hole in the front rotor I think. (maybe not in your case.. sometimes that works though). such wrench can also be handy for getting the airgap adjusted perfectly - and getting the front rotor to run true.

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#10)
by Flux on Mon Apr 4th, 2005 at 08:22:48 AM MST

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(User Info)

Yes M10 or M12 will do fine. Keep the jacking screws as far out as the hole in your stator will allow. Keep adjusting them down in step, if the gap gets unequal it will tip over even with the jacking screws in place.

Flux

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#11)
by picmacmillan (rmacmill@sympatico.ca) on Mon Apr 4th, 2005 at 10:36:14 AM MST
(User Info) http://www.frecklefarmloghomes.com

on my first one, i didn't tap it cuz i was in a hurry, but what i used was the cuott peices from the blades as the chunk of wood tapers ot a point..i used two of them and tapped the wood in and then back out to set the plates down.,..just a thought...looks good :) pickster
http://www.frecklefarmloghomes.com
[Parent]

Re: 48 volt wind generator (3.00 / 0) (#3)
by GBillerty on Mon Apr 4th, 2005 at 06:05:40 AM MST
(User Info)

I think is is doing like Huges book plans: 12 mags and 10 coils five phases.

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#12)
by PRedATor (clothchaspy@yahoo.com) on Tue Apr 5th, 2005 at 05:57:08 AM MST
(User Info)

I've had to move the back rotor from the rear of the hub to the front as my nuts are too thick for a resonable airgap. The rods and nuts are 5/8.
Still working on getting the front rotor on.

rich

Re: 48 volt wind generator (3.00 / 0) (#13)
by PHinker on Tue Apr 5th, 2005 at 08:24:40 AM MST
(User Info)

Looks good, Rich. I see that you're sending pictures from the future. Give me a call and let's talk about stocks :) :)

Paul

Re: 48 volt wind generator (3.00 / 0) (#14)
by PRedATor (clothchaspy@yahoo.com) on Tue Apr 5th, 2005 at 10:27:55 PM MST
(User Info)

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In this part of the earth Paul we have the day first then the month then the year when writing the date :))) look straight down and wave I'm about 12500km looking up at you. heh

cheers

Rich

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#15)
by JYL (JYL at JYL.CA) on Wed Apr 6th, 2005 at 01:40:00 AM MST
(User Info)

Great work. Look very good.

It is still Apr 9, 2005... or Sept 4, 2005

Either way, this is the future.

J-Y

[Parent]

Re: 48 volt wind generator (3.00 / 0) (#18)
by pyrocasto (pyrocasto at hotmail dot com) on Mon May 9th, 2005 at 09:39:51 PM MST
(User Info)

April 9th wouldnt be the future. ;)

Looks good Pred, keep up the work and get that second rotor on. :-)

Chris

If you are offended by me please let me know so I can be offended by you. Proud memeber of POOP. - People Offended by Offended People [Parent]

Re: 48 volt wind generator (3.00 / 0) (#16)
by PRedATor (clothchaspy@yahoo.com) on Thu Apr 7th, 2005 at 06:39:58 PM MST
(User Info)

Here are the numbers for Saturdays Lotto :

12, 25, 16, 2, 30, 7

:))

Re: 48 volt wind generator (3.00 / 0) (#17)
by Lev (leobat@mail.ru) on Mon May 9th, 2005 at 08:24:03 PM MST
(User Info)

Well is made.
In Russia such designs are not popular. Electricity is very cheap. Frequently for it do not pay... I whant made windgenerator to my yacht.

48 volt wind generator | **18** comments (18 topical, 0 editorial)

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