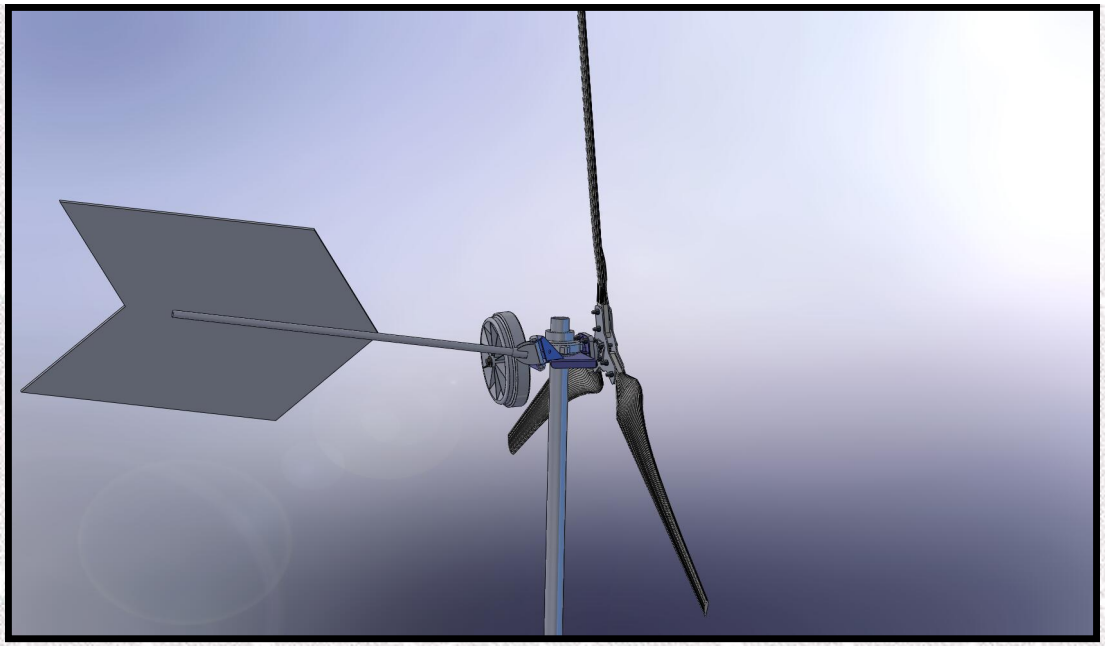

Fisher & Paykel Smart Drive motors

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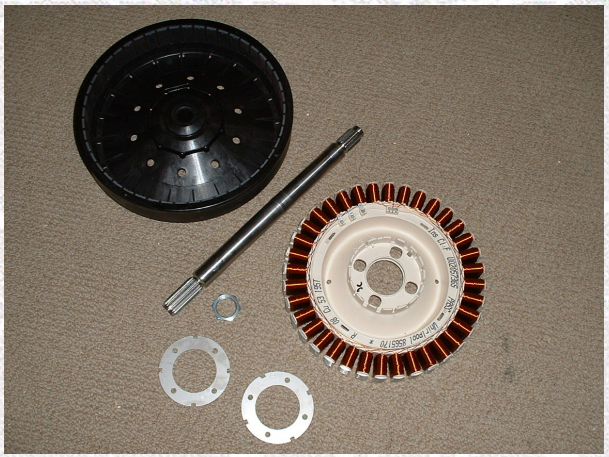
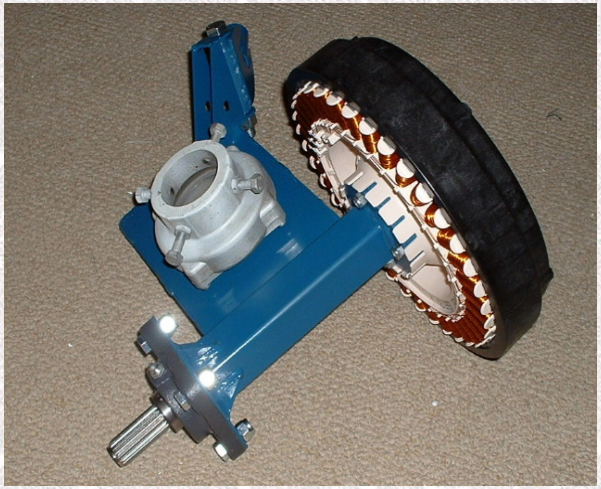
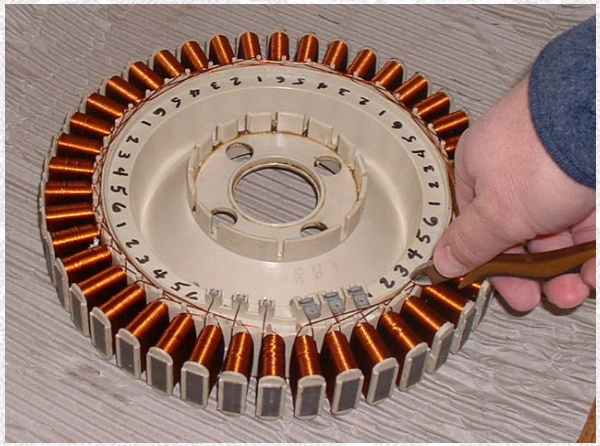


Great news! Randy's Workshop has made an agreement direct with Fisher & Paykel to purchase some factory second motors. These have passed electrical tests but can not be shipped as new because of cosmetic defects. Typically a radial crack in the plastic. They Are, perfect for use as a generator. These are the absolutely latest technology and come with the new 48 pole magnetic hub. These new hubs were designed to make up the performace difference when they change to aluminum wires. According to the factory engineer, when used on the copper wound stators these new hubs increase the performance by as much as twenty percent. The Fisher & Paykel Smart Drive Permanent Magnet motor is comprised of a hub, stator, and main shaft. You will need two bearings and a bearing holder. The new Stator is stationary and comprised of 36 wound coils. The ends of the windings are easily accessible for re-wiring. Since this doesn't have brushes, when the hub is spun it actually becomes an alternator producing AC current. I am going to price this first load at $95.00 each plus shipping. If you are interested please send me an email quickly since this shipment is more than half gone.



Now that I've found a new source for these motors,(both Whirlpool and Maytag have started using them) I've come up with a new pivot weldment. The picture to the left shows my new weldment. This utilizes a UCF205-25 Four bolt flange bearing on the front to take up the blade thrust. The vane pivot is tilted both from the pole axis and main shaft axis like a proper furling pivot. The weldment will be available raw or assembled with the two shaft bearings and all nuts and bolts. This does not include the Yaesu GS-050 Thrust bearing. Raw price is $45.00. Assembled with shaft bearings is $69.00

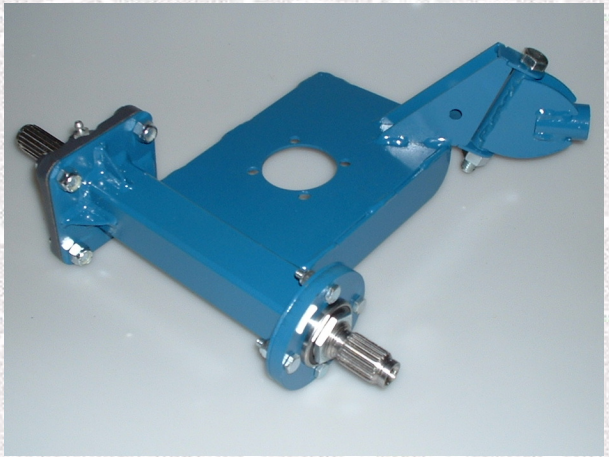


I've gone ahead and made a page showing how I re-wired my F&P unit. Click on the picture to the left to go there. Or here www.watchtv.net/~rburmeister/smart wiring.html. I thought this might help people to see just how easy (and FUN) these units are to work on. This page has been updated to include the new 36 pole model 60 stators.

Here is a picture that one of my customers sent to me of his F&P powered windmill. I designed this universal mount to accept one Smart Drive motor. The mount utilizes a Ham Radio antenna rotor bearing. This bearing is heavy duty designed to allow a large Ham radio antenna to rotate. The clamping bolts allow it to be mounted on a mast from 1-1/4" to 2 inch in diameter.

Please look at the new pivot weldment pictured above.

Here is a picture of the same windmill from a different viewpoint. Rusty carved his own blades and went ahead and figured a good way to mount them. Pretty sharp job.



This is a picture of my new pivot weldment. Here you can see the four bolt flange bearing and 6005 bearing for the main shaft support. The flange bearing has setscrews to help locate the shaft. The furling vane pivot has a 1/2" pipe coupling welded on to it to make mounting the vane arm simple. The 6005 bearing sticks out the required .100-.125" to allow the stator to align itself to provide proper clearance to the magnetic hub.

Here is a picture of my test stand for collecting data on these new model 60 Smart Drive motors. (a model 80 is shown) It is so hard to keep everything going. I just heard that the factory is planning on using aluminum wire for the next generation Smart Drive motor. If you have any interest, you need to get one now while they are still wound with copper wire.

EcoInnovation in New Zealand

http://www.ecoinn.co.nz/

DIY Windmills in Australia

http://www.thebackshed.com/windmill/

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page design: Randy Burmeister
last update: