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## An observation on REMAT

To Whom It May Concern:

For some time I have been observing performance tests on developmental motor-generator combinations in an effort by GMC to demonstrate REMAT (Rare Earth Magnetic Amplification Technology) capability with efficiencies nearly equal to or greater than unity.

At first face, this could be thought of as some kind of perpetual motion device. However, the GMC approach does not consider this, but views it as a recapture of the energy put into the motor that is not used to produce output, with an amplification of that energy by magnetic means not fully understood at this time.

On Friday, June 15, 2005, GMC engineers were conducting a test on a new motor-generator combination wherein motor was being driven by a switching controller applying Voltage sequentially to stator coils of the motor to build up a magnetic fields that was sequentially interacted with the Rare Earth Magnets of the rotor assembly in a normal brushless DC motor configuration. Thus, a high intensity magnetic flux density was being built up when the Voltage was applied to a coil, and that flux field was allowed to disburse when the switch removed the Voltage.

However, a second switch, synchronized to the first, was connected in such manner as to capture the energy of the collapsing magnetic field in the form of an induced Voltage in the coil as the field collapsed.

The energy was being captured into a large bank of capacitors. The capacitor bank has a resistive load that could be turned on or off. There were monitor Voltmeters and Ammeters on the input from the batteries to the motor controller and the output to the capacitor bank. These tests were being conducted primarily to test the functionality of the new synchronized switch.

I observed at three different times when output power, equal to the product of Voltage times current for the load on the device was greater than the input power to the device.

The first was an unanticipated happening wherein we read the meters and the ratio of output power to input power was greater than unity. This

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phenomenon only lasted a few seconds. Then the efficiency slowly dropped to about 70%.

Although there was no test plan, on seeing the greater than unity happening, an attempt was made to repeat it. However, since it was not known what caused it, it was just an attempt to repeat the steps leading to the observation. This was a manual adjustment of the synchronization between the input controller switch and the output switch.

After one such adjustment, I observed that as the motor was accelerating to running speed, the output power was greater than the input power with a ratio of about 1.4 (140% efficiency). In all cases, the output Voltage was greater than the input Voltage. As the motor attained running speed, the efficiency dropped to about 70%.

A third attempt was made wherein the capacitor bank was allowed to charge fully before the load was applied. This took less than a minute. In this attempt, the efficiency on connecting the load to the capacitor bank was about 150%. It slowly degraded over a period of about 5 minutes to unity, and then on down to 70%. When this test was repeated with an adjustment to the output switch, the switch malfunctioned and the testing was forced to a stop.

These three observations of what appears to be greater than unity performance are extremely encouraging to say the least. They open the door to much more investigation into the device.

One key question is how to explain the output Voltage being higher than the input Voltage in all cases. This appears to be a magnetic amplification of the input Voltage by unknown means that require much more investigation.

A second key is how to control the recapture of the magnetic field energy.

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