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# Am I Wasting My Time?

Attention Power Transmission Engineering magazine readers!

I need your opinion/expertise on an issue that has been puzzling me for some time. The subject of the issue is that of a mechanical, continuously variable transmission (CVT)—specifically for automotive use. It is an acknowledged fact that a vehicle equipped with a CVT achieves better fuel efficiency and reduced emissions (20 percent each) as well as improved driveability. That is the good news.

Unfortunately, current CVT technologies, which are all based on friction between smooth surfaces, are limited to smaller vehicles with modest amounts of power. In the case of mid- and larger-sized vehicles, the friction-based concept does not pass the durability and practicality test. That is the bad news.

What is needed is a positive displacement design that does all of the things that a viable CVT should do but without any of the power limitations inherent in current units.

So far, no one has stepped forward with such a design.

This leads me to pose the question: "Is it physically impossible to produce such a design, just as it is impossible to graphically trisect an angle?"

History tells us that in the year 1490, Leonardo da Vinci sketched a variable speed drive mechanism that operated in steps rather than being continuous. (Close, but no cigar.) Legend also has it that in the early stages of the Ford Motor Company, Henry Ford charged his engineers with the task of developing a viable CVT. After some time, they concluded that it could not be done.

I am of the opinion that a viable CVT design is possible, and as such, I am working on a design that is showing a lot of promise. However, considering the history of this subject leads me to pose the following question:

Am I wasting my time in this pursuit?

Readers are encouraged to contact me with their comments and/or questions.

Replies can be made to John Pellegrino, [patp07960@yahoo.com](mailto:patp07960@yahoo.com) or (973) 539-2932.

