



16 May 2014

Potential supporter of Mathers' On/Off Technology:

As a leading manufacturing of on and off-highway equipment (\$34.2 billion in 2013), we are constantly looking for ways to reduce fuel consumption and noise. I have known Norm for about 10 years and seen many creative solutions come from his company. The most exciting concept for me is the On/Off fan drive system which has the potential to reduce both fuel consumptions and noise.

CNH uses a variety of fan drive systems depending on packaging, efficiency, noise, and cost targets. The most common fan drives from the least expensive to the most are: direct engine drive, direct engine drive with viscous-clutch, hydraulic drive with a fixed displacement pump, and hydraulic drive with a variable displacement pump. Higher fuel prices are driving the demand for more efficient drives which are also more expensive. However, in many markets customers are more sensitive to the initial cost versus the operating costs and continue to choose the less efficient options.

The Mather's design, if commercialized, because of its simplicity has the potential to offer the performance close to a variable displacement pump system for the cost of a fixed displacement system. This is a huge value proposition that would help shift the market to more efficient systems. CNH is definitely interested in using the Mather's On/Off Technology.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Kassen', with a long horizontal flourish extending to the right.

Gary Kassen
Engineering Director
Hydraulics & Pneumatics

Cc. Norm Mathers