Advanced Oil & Thermal Management Technologies

Speaker: Steven T. Scott

ABSTRACT:
With the push towards emissions reductions and fuel economy improvements, advanced oil & thermal management technologies have been developed for diesel engines used in the transport market. These technologies are now being applied to the engines used in the Heavy Oil Industry of Western Canada.

This presentation will focus on an oil management and a thermal technology currently being used on oil field pump jack engines that drive PC pumps.

The oil management technology being used allows the engines to run continuously, without having to shut down for any lubrication system maintenance. The technology includes innovations that change the engine oil, the engine oil filter, and top off the oil in the oil pan; all while the engine continues to operate.

The thermal management technology being used better controls the temperature the engine operates at. Today, most engine cooling is performed using pumps and fans that are mechanically driven. This creates a large draw on the engine horsepower and does not optimally cool the engine. Electrification of the pumps and fans in the cooling system provides energy saving and controlled cooling of the engines. This can lead to improved fuel economy and increased engine life.

BIOGRAPHY:
Steve is currently a Senior Product Development Engineer with EMP Advanced Products. He holds a Bachelors of Science degree from Michigan State University. After working in the hydraulics industry, he joined EMP in 1995. Since joining EMP, he has been involved in the development and testing of many oil and thermal management technologies for engines that reduce emissions, increase durability, and improve fuel economy. Steve has been an active member of the American Trucking Associations' Technology and Maintenance Council, serving on various task forces within the council.