D MAX Ltd. is a joint venture between General Motors and Isuzu that builds the Duramax diesel engine for heavy duty GM trucks. DMAX started production in 2000 after the closing of an obsolete engine plant. Our IR program started 7 years ago and we are proud to say 7 years later IR really is utilized daily at DMAX. It saves time and money everyday, and has paid for itself a 100 times over. We started our predictive program in January of 2005 when GM mandated it as apart of their QNPM program. The two predictive techs, one mechanical and one electrical, started their IR training the 2nd week of January. The plan was for both techs to be crossed trained in each technology. Now in 2011 three techs at DMAX are level II thermographers and DMAX has presented papers twice on their IR program at Inframation's annual conference. We have also been published in Hydraulics & Pneumatics magazine highlighting one of these papers. We have come a long way in 7 years but we still find it hard to believe how successful this technology turned out to be.

The team has changed and grown but, each year we have gone back and tried to improve all of our predictive programs and IR is no different. In 2007 the predictive team started trending IR temperatures. Four years ago we started trending our Assembly Conveyor motors. Our assembly area has in excess of 1,000 feet of conveyor driven by 260 1 hp motors. A run to failure attitude is generally used in these applications. However, in an application where 260 1 hp motors are apart of critical conveyors, trending is a necessity.

Four years later we are still trending and not just Assembly motors. The trending and planned repairs have enabled DMAX Limited's Assembly Department to run without any downtime due to mechanical drive failures for more than four years and Assembly uptime has stayed above 97% as a direct result. This technique enabled us to not only utilize our IR camera more effectively, but it also enhanced our use of Ultrasonic analysis. We think it showed us that one technology isn’t a replacement for another, but when used together they compliment one another. We use our IR camera to quickly identify potential problems and then use Ultrasound, Vibration, and MCA to diagnosis the problem and determine the severity. In an environment with like equipment trending, whether it be temperature with an IR camera or DB’s with an Ultrasonic probe is key in identifying potential problems before catastrophic failure. At DMAX we have been successful in using non-intrusive predictive tools to decrease downtime. Trending isn’t fancy but it works.

We are successful because we use all the technologies together. These technologies empower you and your company to make important cost saving decisions with accuracy and assurance. We are the 2011 IR program of the year because predictive technologies work!

Predictive Equipment
- Infrared-Flir P65
- Vibration Analysis-Emerson /C3 2130
- Motor Circuit Analysis-All Test Pro On and Off line testers
- Ultrasonic UE Systems Ultraprobe 10,000
- CMM-MAXIMO 7.5

DMAX, Ltd & IR

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