CASE STUDY

DRILL RIG COOLING SOLUTIONS

H-E PARTS COR COOLING (H-E PARTS) SPECIALIZES IN APPLICATION SPECIFIC HEAT TRANSFER SOLUTIONS FOR THE MINING AND OFF-HIGHWAY MARKETS. H-E PARTS OFFERS INNOVATIVE SOLUTIONS THAT PROVIDE ADDED VALUE BY EXTENDING SERVICE INTERVALS, IMPROVING PERFORMANCE AND INCREASING PRODUCTIVITY, WHILE REDUCING DOWNTIME AND ASSOCIATED LIFE CYCLE COSTS.

Hagstrom Drilling approached H-E Parts with overheating issues relating to a possible engine fan and radiator concern in their Morooka MST 1500 Drill Rig. This machine is designed and manufactured in Japan where the ambient temperatures are approximately 30° C / 86° F. Most Australian industrial sites average 50 °C / 122 ° F.

After struggling with this issue for many years working in these high temperature areas, it was apparent that the fan and radiator required urgent assessment. In addition to the radiator and fan assessment, the question was asked what options are available to improve/increase the cooling capacity of the hydraulic system.

H-E Parts offered three improvements for the customer:

- Re-build the radiator with a high efficiency core to better suit the high ambient temperatures.
- Redesign a replacement fan suitable to the engine and capable of cooling at high ambient temperatures.
- Custom designed a hydraulic oil cooling package including 4 x 24V electric thermo fans removing the need for the two existing under capacity units.

LOCATION	Western Australia
APPLICATION	Morooka MST 1500 Drill Rig
PRODUCT	COR Cooling™ / Multiwing

H-E Parts replaced the radiator core with a more efficient core that allows for a larger cooling capacity with better airflow. In combination with the radiator re-build, H-E Parts worked closely with Multi-Wing to redesign a suitable replacement fan that provides higher airflow. The radiator and fan combination work better to achieve a more efficient cooling solution, better suited to Australia's ambient temperatures of 50 °C / 122 ° F.

H-E Parts also supplied a hydraulic oil cooling pack, which was a combination of a heavy-duty aluminum bar and plate oil cooler, 4 thermo fans and fan housing. The hydraulic cooler design will attach to the side of the machine providing superior cooling for the hydraulic oil circuit.

H-E Parts offered the customer a timely solution that reduced associated costs with equipment downtime while being considerate of their time constraints.

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