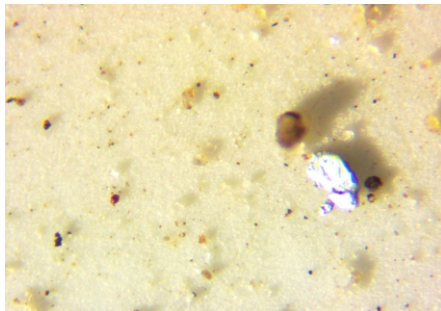
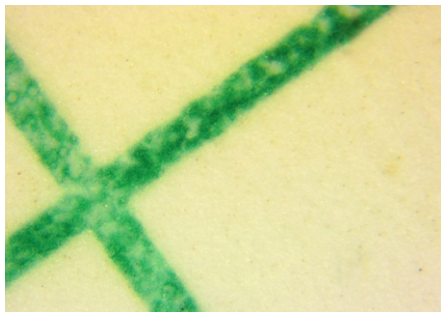


MEETING OEM CLEANLINESS REQUIREMENTS WITH ISOCLEAN® CERTIFIED LUBRICANTS.



Pre ISOCLEAN Patch Test
Hydraulic Oil SAE 10W
Magnification = 100X



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The Challenge

N.A. Degerstrom Inc. has served the mining and construction industry since 1904 including an active phosphate rock mining operation in Soda Springs, Idaho. The Soda Springs equipment maintenance team has a continuous improvement culture and is constantly challenged to extend equipment life and increase equipment uptime. To achieve these goals, the maintenance team works very close with their suppliers.

Investigation and Site Assessment

In a effort to support N.A. Degerstrom's continuous improvement, a Chevron Lubrication Marketer began discussions with the Maintenance Manager and Shop Superintendent on possible ways to increase hydraulic system and transmission life through oil cleanliness. To gain a better understanding of the opportunity, the Lubrication Marketer and Chevron Technical Teams implemented the Chevron RBL™ Best In Class site assessment tool. This process included reviewing the current practices for lubrication, product storage and handling, equipment requirements and lab analysis of current hydraulic oil and transmission fluid. A key finding from the site assessment was the current ISO Cleanliness particle counts of the hydraulic fluid (22/19/17) and transmission fluid (21/19/16) being dispensed into the equipment did not meet the OEM's requirement of 18/16/13. This elevated level of contamination which is 8 to 16 times higher than what the equipment manufacturer requires could have been leading to reduced component life by a factor of 3 times.*

Solution – Start Clean & Stay Clean

The Marketer implemented the Chevron ISOCLEAN® Certified Lubricants Program. The N.A. Degerstrom Maintenance and Marketer teams set an ISO Cleanliness target code of 17/15/12 for new hydraulic and transmission oils delivered to the mine. The Marketer is providing Chevron TorqForce® SAE 10W - ISOCLEAN Certified and Chevron TorqForce SAE 30 - ISOCLEAN Certified to 17/15/12 on every delivery. The Marketer's technical team is also assisting N.A. Degerstrom in improving their entire lubrication product storage and handling program to help isolate and control contamination ingress.

Results – Extended Equipment Life Cycles and Improved System Performance

N.A. Degerstrom is now starting with Chevron ISOCLEAN Certified hydraulic and transmission fluids dispensed directly from their shop nozzles which meets their OEM requirements for both performance and cleanliness. Working through the Chevron RBL Opportunity Value Assessment process, the team has jointly identified areas for improvement including component life extension and equipment uptime. The entire team has regularly scheduled Chevron RBL Business Reviews to observe the results of the data collect and analyzed. All of the opportunities for improvement are tracked and process is monitored during these meetings.

*According to the Noria component extension table