

Case Study: Hydraulic Filtration March 2013



Photo A



Photo B

Precision Drilling Calgary, AB Canada

APPLICATION: Hydraulic system on Slant Drill Rig 300

PROBLEM: Contaminated oil causing premature hydraulic component failure. The traditional filtration depth media is unable to filter contamination to sub-micron levels required as tolerances on hydraulic components are below one micron.

SOLUTION: Rob McQuinn of Wajax in Calgary, (OEI Distributor) suggested replacing the OEM PTI filter number F8G150 center post with OEI's magnetic filter rod 3RPTIF8G150 in order to remove this contamination down to submicron levels. This will extend fluid and system life increasing uptime.

RESULTS: "We are currently seeing the benefits of using OEI's magnetic filters through reduced particle counts during oil sampling. The sub-micron and the larger particles as seen on the magnetic filter rods in several of the pictures will undoubtedly result in reduced equipment wear. I am quite confident that hydraulic component life will be extended and that downtime due to catastrophic failure will be substantially reduced" states Brent Pavelich, Precision Drilling's Equipment and Maintenance Manager.

Prior to installing the OEI filter rods the hydraulic oil ISO count was 19/15 with a 5 micron count at 3,719 & 10 micron count of 778ppm. After 3 months of operation with the OEI filter rods installed the ISO count was 16/13 with the 5 micron count at 505 & 10 micron count of 149ppm.

During the 3 month test a hydraulic gear drive divider failed and the OEI filter rod trapped the metal debris (Photo B) before it could contaminate the rest of the hydraulic system and cause further component failure.

RECOMMENDATION: Install OEI magnetic filters at all possible locations on your hydraulic system to ensure protection from contamination down to sub-micron levels. For more information, contact our office at 403-242-4221 or visit our website at www.oneeyeindustries.com