

# CASE STUDY



## THE RIGHT MULTI-PURPOSE GREASE MAKES A BIG DIFFERENCE

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*Kyle Loney  
President and Owner  
Wolf Mountain Diamond Drilling and Exploration*

How you take care of your drilling equipment can have a major impact on your drilling performance. The regular use of drilling lubricants, or grease, is always recommended for proper maintenance and to extend the life of your drilling equipment, including drill rods, core barrels and other moving parts. Longer life for your equipment can lead to lower operational costs. Proper maintenance can also have a positive impact on penetration rates, improve core recovery and extend core bit life.

So it is imperative to choose good quality multi-purpose grease that provides a tough lubricating film to keep equipment running smoothly and reduce wear and tear. Choose a grease that is made for high pressure applications and has excellent water resistance. As a few of our customers found out, not all products are the same. The right choice can lead to cost savings and more efficiency.

Wolf Mountain Diamond Drilling and Exploration is a service company that is active in all areas of mineral exploration, including diamond core drilling, surface sampling (channel bulk), and line cutting geophysics. The company owns and operates diamond drills in Ontario, Canada and across the world.

Of all drills, the diamond drill has by far the highest performance. A diamond drill can reach rotation speeds greater than 1200 rpm and works with water pressure that can exceed 1000 PSI. This puts enormous stress and pressure on the bearings and moving parts of the standard head assembly of a core barrel. The rotation speed and the pressure causes severe water wash out of the bearings of the head assembly. The grease deteriorates with use and with the circulating high pressure water.

### Situation

During a field visit, Fordia’s technical team noticed that Wolf Mountain was using an excessive amount of multi-purpose grease. They suggested trying a different product to see if it would make a difference. There are usually two head assemblies running on a drill rig. While the helper is busy lubricating and maintaining one assembly, and emptying the core, the driller is busy filling the other assembly with new core. This presented an excellent opportunity to test the recommended Robco multi-purpose grease in one assembly and compare its performance to the competitor brand in the other assembly.

It is common practice to pump grease into the bearings via the inner tube cap. On average using the competitor brand, it took up to 10 pumps of the grease gun to refill the head assembly and evacuate all the water. During testing, every core run would now only take 2 pumps of grease to refill the inner tube cap and evacuate all the water.

The first assembly needed to be cleaned completely and re-filled with **Robco EP/MP 1004**. The Fordia team cleaned all the old competitor grease out of the inner tube cap and bearings, as along with the grease cartridge. The competitor’s brand of grease remained in the second assembly. Fordia’s team suggested performing several drill runs before they opened them for inspection.

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## Results

After opening the first assembly, the Robco grease showed much better colour and no water present in the cap. The product demonstrated superior resistance to water pressure and flow. The bearings stayed cooler, showed less wear and tear. Over time, the bearings lasted longer. More importantly, with the **Robco EP/MP 1004**, the drillers were using between 60 and 70 percent less grease.

Meanwhile in the second assembly, the competitor's grease had lost its color due to contamination of water. Moisture was visible inside the cap and they could see water droplets on the grease.

More importantly, with the **Robco EP/MP 1004**, the drillers were using between 60 and 70 percent less grease. Impressed with these results, the drillers also began using the Robco Extreme Pressure grease in every other grease fitting on site, including the rotation heads, hydraulic pin connections, tractors, motor couplings support equipment etc. The drillers noticed a marked difference in each of these examples as well.

«Robco grease lowers our overall cost for high pressure grease by providing a superior product as compared to anything else we've used. This, combined with the extended life of lubricated parts and fewer breakdowns, results in time and cost savings for our small operation,» said Kyle Loney, President and owner of Wolf Mountain Diamond Drilling and Exploration. «After seeing the results from the head assembly tests, there is no question that the Robco grease is of much better quality, and is better able to reduce washout,» he added. The customer is enthusiastic about the product and plans on using it in the future.

The Fordia team repeated these tests at other customer sites as well with the same results, demonstrating the product's superior quality even in varying conditions. They are confident in the product's ability to help improve drilling performance, which is the company's mission. That, and making drillers' lives easier. Visit [www.fordia.com](http://www.fordia.com) to learn more about products that can help improve your drilling performance.

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