

CASE STUDY

HIGH-PERFORMANCE POWER TOOL GREASE

INDUSTRY: Power Tools

APPLICATION: Angle Grinders

COMPONENT: Gear Train

LOCATION: USA



BACKGROUND

When the proper power tool lubricant is selected it can lower tool temperatures, reduce power consumption, and improve ergonomics—all of which lead to improved product performance and increased productivity. A market leader who specializes in power tools for the DIY consumer and those in commercial trades, reached out to Nye to help lubricate gears in their angle grinders. These angle grinders operate at high speeds of 6500 to 8500 rotations per minute and can generate a great amount of friction from regular operational use. The lubricant would prevent the gears in their gearbox from wearing prematurely, thus increasing the overall lifespan of their angle grinders.

CHALLENGE

- · Can the lubricant reduce friction and high temperatures in the gearbox?
- Lubricant must be cost-effective.

SOLUTION RHEOLUBE® 380 & RHEOLUBE® 380-G1

Lithium soap thickened greases that are EP fortified and rust inhibited.

- · Excellent metal on metal protection
- Performs well with heavy loads
- Wide temperature range performance of -50 to 130°C



RESULTS

Rheolube[®] 380 and 380-G1 successfully passed all life cycle test requirements, extending the life of their angle grinders at the right price point. This will reduce premature product failure and save warranty costs. This customer and other market leaders now use Rheolube[®] 380 to lubricate small angle grinders and Rheolube[®] 380-G1 to lubricate large angle grinders.

Base Oil Properties	Conditions	Rheolube® 380	Rheolube® 380-G1	Test Method
Chemistry		PAO / Ester	PAO / Ester	
Temperature Range		-50 to 130°C	-50 to 130°C	
Kinematic Viscosity	40°C	33.6 cSt	37 cSt	ASTM D-445
Viscosity Index		136.7	129.9	ASTM D-2270
Grease Properties				
NLGI Grade		2	1	ASTM D-217
Oil Separation	24 hrs, 100°C	4.5%	18.6%	ASTM D-6184
4-Ball Load Wear Index		34.8	35.6	ASTM D-2596
SRV OK Load	75°C, 1 mm stroke, 50Hz	1400 N	800 N	ASTM D-5706

Since 1844: Our performance is reflected in the value we bring to our customers.

Nye Lubricants is a leader in the innovation, formulation and provision of synthetic lubricants, enabling and improving breakthrough products and critical new technologies. We bring proven experience, deep technical knowledge and customer focus to solve our customers' toughest challenges, adding tangible value to products in a wide range of industries and applications.

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