

Retraplex Diamond Blue is Drydene's Crown Jewel



Drydene® is confident the latest addition to its popular Retraplex® line could become the grease of choice for the market.

Retraplex Diamond Blue™ is a new premium-grade lithium complex grease developed from the ground up that fills the market's need for a truly versatile product—ideal for heavy-duty use whether in the commercial, agricultural, mining or construction sectors.

"There's been a gap in the market for a product like this, and we believe we've created something really special," says Dave Stover, product manager at Drydene Performance Products.

"We're always looking to expand our range, rework existing products and improve our chemistries. Product innovation is always a focal point for Drydene."

Diamond Blue was launched in May after a year in development and extensive testing to ensure it could withstand the rigors of modern machinery.

Drydene wanted to develop a grease that not only excelled in reducing friction and extending the life of equipment but also boasted excellent wear protection, superior performance in wet conditions and a wide temperature range.

"The formula features some very robust extreme pressure properties, which also lends itself to heavy load bearing capacity," he says. "The product's water-resistant properties result in extremely low water washout and spray-off, which means the grease stays where it is supposed to be, and surfaces are always being protected. In addition, Diamond Blue has an extremely robust roll stability rating."

"With our unique polymer configuration, the cohesion and adhesion of the grease helps provide a long-lasting protective boundary layer. It is very tenacious, and the lab and field testing we've done so far has been excellent in terms of physical consistency and extreme-pressure performance," adds Stover.

Since Drydene introduced its Retraplex greases three years ago, it has quickly established itself as a trusted brand suited to a wide variety of applications. Diamond Blue joins Retraplex Onyx, Topaz, Ruby Red, and its top-selling Ruby Red Plus greases.

"We know from our early market feedback there is tremendous excitement about the product, and I think the reaction is going to be very strong," says Stover. "We're pleased with the results and know our customers and users will be as well."

"Diamond Blue has unique physical characteristics and an advanced copolymer configuration, which is what lends itself to how the product reacts to the elements in exposed environments. Where it shines the most is being outdoors in adverse conditions. It takes lithium complex grease to another level." □

To find out more about Drydene Retraplex Diamond Blue, visit www.drydene.com/BLUEGREASE

Key Performance Properties

Property	Test Method	Retraplex Diamond Blue
Four Ball EP Weld Point, kg	ASTM D2596	620
Four Ball EP Load Wear Index	ASTM D2596	101
Four Ball Scar Wear, mm	ASTM D2266	0.41
Water Washout @ 79°C	ASTM D1264	1.8
Water Sprayoff, %	ASTM D4049	9.0

From industrial machinery to the modern motor vehicle, technologies are changing rapidly—as are expectations for improved performance and efficiencies. For grease manufacturers, the challenge is to constantly enhance and modify formulations to keep pace with these ever-changing demands and requirements.

For decades, the industry has relied on the National Lubricating Grease Institute's GC-LB Certification Mark, an easily identifiable logo, to help end users ensure the right greases are used for the right applications. After all, using an unsuitable product could result in costly equipment failure, or at least reduced efficiency and effectiveness.

Yet while greases have seen their fair share of change over the years, NLGI's globally recognized mark has not. When it was created, for example, vehicles did not have such long warranties and greases did not need to operate in such a wide temperature range. Many manufacturers have actually exceeded the standards, the technology overtaking them.

Now, 30 years after their introduction, Chuck Coe, consultant with Grease

Technology Solutions who also sits on the NLGI board of directors, says it is time the NLGI grease specifications were enhanced to meet today's performance and market needs.

The changes will be twofold. First, said Coe, the existing GC-LB performance classification is being "upgraded," along with standards organization ASTM International, focused on revising and improving current test methods.

Originally targeting the automotive sector, GC-LB has long been recognized by specifiers as an indicator of quality and performance for greases used on wheel bearings and chassis systems.

These past few decades, grease producers have been able to meet certain criteria and register their products so they can bear the mark on their packaging. In September 2019, a total of 308 products had been licensed, prov-

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ing that they comply with ASTM D4950, "Standard Classification and Specification for Automotive Service Greases."

It was recognized that some of the tests had precision problems, so ASTM is currently working on overhauling several of the tests. Specifically, this includes addressing the precision of the current wheel bearing life test, as well as ironing out problems with the fretting wear test.

Grease manufacturers will soon see an entirely new grease standard in place, too.

NLGI is hashing out a new high-performance multiuse (HPM) grease specification, said Coe. This is being finalized and, despite the current coronavirus lockdown, it remains on track to launch in January 2021.

The HPM standard is aimed at industrial applications and has been developed to cover everything from pumps to conveyor belts, rather than the automotive sector already served by GC-LB, he noted.

The new grease certification mark will not replace the long-standing GC-LB standard but will run in parallel, setting out criteria for high-performance multi-use greases. NLGI has committed to continuing support of GC-LB certification and the use of the mark.

"As users come to realize HPM is actually superior and it becomes more widely recognized, it wouldn't surprise me if they eventually shifted across to this new specification, but we will not be ending our support for the GC-LB spec," Coe assured.

Besides a base HPM specification, there will also be five sub-categories: Enhanced Water Resistance (WR), Enhanced Load Carrying Capacity (HL), Enhanced Salt Water Corrosion Resistance (CR), Enhanced Long Life (LL), and Enhanced Low Temperature (LT) greases.

NLGI expects to have HPM and four of these enhancements ready for the start of next year, but Coe said the fifth, the LL enhancement, will follow sometime later as it will take significantly longer—perhaps a few years—for NLGI and ASTM to develop and approve the necessary dynamic grease life test.

"This is just the start, and it will cer-

tainly evolve over time. We need to gather far more data for some of the testing so haven't set the final limits yet," he said.

"Unlike GC-LB, I think it far more likely that the HPM spec will be updated periodically. We anticipate that this will be used as the foundation and that OEMs or end users will eventually put additional requirements on top of that."

A working group held initial discussions about the new specification in 2015, with a steering committee formed in mid-2019. Industry stakeholders have been invited to offer their input and feedback about the new requirements.

Despite the disruption caused by the Covid-19 outbreak, Coe remains confident everything will stay on schedule in the months ahead, with final approval expected by September. At the time of writing, the logo design was still to be confirmed.

A day-long online workshop held in March involved 45 participants including OEMs, grease producers, additive suppliers and test equipment manufacturers, to discuss progress and to build consensus—demonstrating widespread support from the industry.

The proposals have been welcomed by the grease sector, he noted, and the

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reception has been overwhelmingly positive about the new HPM specification.

"It has been decades since the last industry approved certified spec was issued and there really is no better time than the present to introduce an improved one," said Wayne Mackwood, global head of detergent and grease technology at Lanxess. "This will help level the playing field and make the decision-making process for the end user much simpler and more confident."

"The time is right to have a specification aimed at industrial use—to have a foundation in place for high-performance greases with sub-categories targeting the needs of different applications within the industrial space," added Matthew McGinnis, vice president, commercial development at Daubert Chemical Co. "I think it's a great stepping stone to have something more applicable to real-world end users, and I'm really happy with the direction it's going."

"There's a lot of colorful language in the lubricants industry around performance, which can set high expecta-

tions for products that maybe should be considered average," he continued. "This makes it difficult for end users to correctly identify the grease that best suits their needs. The new certification mark should help diminish the confusion created by various marketing claims and help people understand whether these greases truly are worth a premium."

David Turner, product specialist in the Fluid Technology Group at Citgo, agreed. "Many greases are used in a wide variety of applications today, and some grease manufacturers make claims for applications for which their greases may not actually be suitable," he said. "The introduction of the NLGI HPM grease specification will set a standard for general use greases that can be quoted in equipment operations and maintenance manuals and requests for quotations for bid purposes. The NLGI HPM specification will provide a common basis upon which greases can be compared."

"Once these specifications are instituted, it will be difficult to imagine how

the industry survived without them," Turner concluded.

Today, companies that want to carry the GC-LB Certification Mark need to fill out forms, certify they have the relevant test data and submit the information and fees to NLGI. An audit program is also in place. The new standard will be far more rigorous, said Coe. With HPM, the audit procedure is going to be even more extensive, with a requirement to submit the supporting test data.

"I'm not familiar with anything like this being done anywhere else in the world," insisted Coe. "This is a real landmark."

For a rapidly changing marketplace that is becoming even more demanding of its greases, having suitable standards in place that meet these expectations is paramount. In the coming months, the various stakeholders will be focused on finalizing these plans to ensure a frictionless transition. □

In this Spotlight, Dorf Ketal, Lanxess, Drydene and SQM highlight how they are meeting the changing needs of the grease market.