Edition |

GBR TECHNOLOGY LIMITED

High Performance Lubricants

NEWSLETTER

Welcome *to this - our first edition of the lubricant newsletter from GBR Technology. Designed to educate on areas of lubrication, inform you of the products we offer and also to help you get to know us – so hopefully we can then service your needs even better.*

Based on the Hampshire/Berkshire border with sales staff from Cornwall to Scotland and an export business around the globe we are here at your service when you need us!

We are passionate about lubrication. We help procurement specialists and engineers source the materials they need as well as providing detailed input to design engineers working on advanced high tech systems for the future.

Our business is primarily concerned with high quality, high performance fluids – from extreme performance PFPEs, silicones, PAO synthetics, esters and high purity mineral oil bases including food grade lubricants. Covering such products as Krytox™, Anderol®, Bechem and Apiezon grades, we have access to some of the most advanced lubricants from the most highly respected brands on the planet.

The best quality lubricants, matched to the right application and used in the right way give the best performance and lower overall cost – reducing downtime and maximising asset life.

So to this edition: We'll introduce ourselves and some of our key distributorships, Alan Follett writes on the topic of speccing the right lubricant for the job in hand and there's an overview of base oil types.

We hope you find it useful!

Paul Morris
Managing Director

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Anderol® Krytox® Performance Lubricants BECHEM LUBRICATION TECHNOLOGY APIEZON

About us and the brands we represent

The use of lubricants is vast and wide reaching. A high performance food safe grease for a food manufacturer, a lubricant for a Formula One car, a specialist lubricant able to withstand extreme operating temperatures and reactive environments – just three examples of the many areas in which we are active. Lubricants are a crucial element to the productivity of many organisations globally, if something moves then it will often require lubrication. When it comes down to its basic form the job of a lubricant is to keep two surfaces separate from each other. However, there are many elements that can affect the performance of a lubricant - temperature, contamination, oxidation, depletion of additives, reaction with system materials, to name a few, so selecting the right lubricant for the right application is absolutely crucial. Optimum lubrication means higher productivity and longer asset life – lower cost in the long run!

GBR Technology formed as the fluids and greases offshoot of CVC Scientific Ltd. Our GBR branded vacuum oils have a heritage that goes back over 50 years. They are amongst the finest refined vacuum oils available and we ship these to customers around the world. Our GBR branded oils are complemented by the branded oils and greases we offer through our distributorships e.g. Krytox™, Apiezon, Bechem and Anderol®.

Our service delivery is an important element of what we do too. When you call us you will always speak to one of the team directly who will be ready and willing to help – be it to simply provide product availability information, general, technical and safety data or in-depth advice for your application – and yes we have even advised on use of lubricants in rocket science!

As distributors for Anderol®, Apiezon, Bechem, Chemours Dry Film, Chemours Krytox™, plus our own branded heritage silicone and vacuum lubricants, our range of products are carefully selected so we can offer the most effective solutions across a variety of industries. These include Aerospace, Automotive, Chemical, Defence, Food and Beverage, Industrial, Metal Manufacture, Motorsport, Paper and Vacuum to name a few.

Within the team at GBR and the brands we represent we are fortunate to have access to some of the most knowledgeable and experienced minds in the industry. This enables us to not only advise on lubricants suitable for use but to act as a trusted advisor to our clients and to work with them on any issues they are experiencing to come up with the most suitable solution. Understanding the application of where a lubricant is being used and being able to clearly define other elements that can affect its performance is vital. We charge for products, not techncial advice and support – as a customer you benefit from our expertise without us trying to charge you for this.

Here is a little more detail on the products we represent as the major UK supplier or authorised distributor:

ANDEROL® Specialty Lubricants

Anderol® is a global producer and marketer of synthetic specialty lubricants. Since 1941, Anderol® Specialty Lubricants has been a leading innovator in the development of synthetic lubricant solutions for a wide range of Industrial and Food Grade applications.

Anderol® established a global reputation as a manufacturer of high performance lubricants within the industrial markets, particularly in air compressors and vacuum pumps and is also specialised in total H1 plant lubrication for industries serving the food, animal feed and pharmaceutical markets worldwide. Anderol® is certified to ISO 9001:2015 and ISO 21469, and has been awarded with Kosher and Halal registrations on its food lubricant plant.

Apiezon High Vacuum Sealants, Lubricants and Etch Resist

M&I Materials Limited have been manufacturing Apiezon products for over 80 years with products available globally.

Apiezon is a range of high vacuum greases, vacuum sealants and lubricants that are favoured around the world because of their quality, consistency and excellent performance in vacuum applications. Waxes, etch resist and AP201 vapour booster pump fluid have also been developed as part of the Apiezon range.

Apiezon High Vacuum Greases

Apiezon is proud to offer the most comprehensive range of high vacuum greases available from a single manufacturer. The majority of Apiezon greases are hydrocarbon based: Apiezon H, L, M, N, T, AP100, AP101. However, Apiezon PFPE 501 is a PFPE based, chemically inert, high temperature and extreme pressure lubricant. With an upper operating temperature of 250°C and vapour pressure of 1.3 x 10^{-12} Torr at 25°C, it's robust, versatile and can be used for sealing and lubricating under the most extreme operating conditions. It's ideal as a sealant and lubricant in short path distillation, coating and semiconductor industries.

Chemours DryFilm for Industrial/Manufacturing Applications

DryFilm lubricants are excellent products for situations where long-term friction reduction, clean adherence to components, or cosmetic appearance are top priorities. DryFilms are extremely stable and nonflammable, and have a variety of uses in manufacturing applications. These include:

- Coating and Strippability Lubrication Products
- Wire Drawing Lubrication Products
- Automotive Under-Bonnet and Vehicle Cabin applications
- Consumer Goods Manufacturing

Chemours DryFilm products are effective for metal-on-metal, plastic-on-metal, or plastic-on-plastic connections and facilitate easy movement for switches and connectors. Since DryFilm products do not attract dirt, they keep surfaces clean and connections intact. DryFilm products are thermally stable and can be used at temperatures up to 300°C.

DryFilm products also play a significant role in reducing the presence of buzz, squeak, rattle (BSR) and noise, vibration, harshness (NVH) in vehicles. These products can be sprayed onto components, such as plastic clips used to hold instrument panels together – to eliminate friction and noise caused by heat expansion or vibration.

While many greases and oils are often dark-colored or messy, Chemours DryFilm lubricants are clean, non-oily and non-staining, enabling lubrication of moving parts like removable seats or armrest mechanisms without negatively impacting cosmetic appearance.

From dishwashers to cabinet drawers, DryFilm products are used in the manufacturing of a wide variety of consumer goods. Manufacturers know that choosing the right Chemours DryFilm product improves quality because they can:

- Prolong the life of a product
- Enhance its performance
- Set it apart from the competition

DryFilm products reduce friction and allow connectors or seals to easily slip into their appropriate connections. They also provide components with permanent protection from dust, dirt, and contaminants - unlike hydrocarbons and silicones that go on wet and attract dirt.

Introduction to **Krytox™** Lubricants

Discovered in 1959, the polymer that would become known worldwide as Krytox™ showed remarkable thermal and oxidative stability. In 1963, Krytox™ oil was used in a GE engine test for the supersonic transport aircraft. In 1964, new Krytox™ perfluoropolyether (PFPE)-based grease formulations were developed jointly with the U.S. Navy and Air Force, resulting in military specifications. The first commercial sales of Krytox™ were for nonflammable lubricants for the Apollo space program in 1965.

Prior to 1981, the only commercially available Krytox™ lubricants were aerospace oils and greases. Since then, PFPE-based oils and greases have been adopted across a very wide range of industries and applications. There are PFPE oils and greases for industrial operations, vacuum pump fluids, incidental food contact, automotive uses, reactive gas, and, of course, military applications - to name just a few.

Krytox™ perfluorinated oils and greases deliver high performance, perform at wide temperature ranges, and provide superior quality lubrication under extreme conditions in comparison to hydrocarbon alternatives. With a global distribution network and world-class technical service, Krytox™ is the lubricant of choice for extreme conditions and performance. The use of Chemours unique PTFE thickener provides superior chemical and thermal stability to all Krytox™ grease product lines. Many greases are also available with additional anti-wear and anti-corrosion additives to further boost performance in critical operations.

Krytox™ performance lubricants provide superior performance and extended life as lubricants, sealants, and dielectrics. With exceptional performance and reliability in the toughest conditions. Where productivity matters and downtime costs, Krytox™ can contribute significantly to lowering the operating cost.

Key Benefits:

The key benefits of Krytox™ lubricants include:

- Extreme temperature stability, with operating ranges from -75 to 350°C (-103 to 662°F) and as high as 400°C (752°F) with appropriate metallurgy
- Longer lasting lubricant life
- Reduced equipment failure and maintenance: warranty claims and replacement costs may be reduced
- Increased profits; reduced downtime and maintenance costs
- Odourless and colourless
- Inert, non-toxic, and nonflammable
- Stable in 100% liquid or gaseous oxygen environment
- Chemical, biological, and environmental inertness
- Non-toxic and silicone-free formulation
- No hazardous VOC materials or chlorine content
- Non-hazardous to the atmosphere or ozone layer

Bechem Lubricants

Bechem was established in 1834 and were the first industrial lubricant manufacturer in Germany. Bechem today have global operations and are a leading manufacturer of high-quality specialty lubricants and metalworking fluids.

With innovative formulations in the most diverse of industrial applications and a wide number of approvals, Bechem products are working for, and impressing users around the globe.

Bechem have a global network of partners and a number of international production sites. Technically Bechem are extremely strong with an extensive development and test laboratory with a very wide range of equipment operated by dedicated and experienced personnel.

Focus industries for Bechem include:

Automotive Manufacturing
Railway Technology
Steel
Cement
Wood and Paper
Fitting Industry
Pellet Presses
Mining
Pharma
Food
Metal Machining and Forming

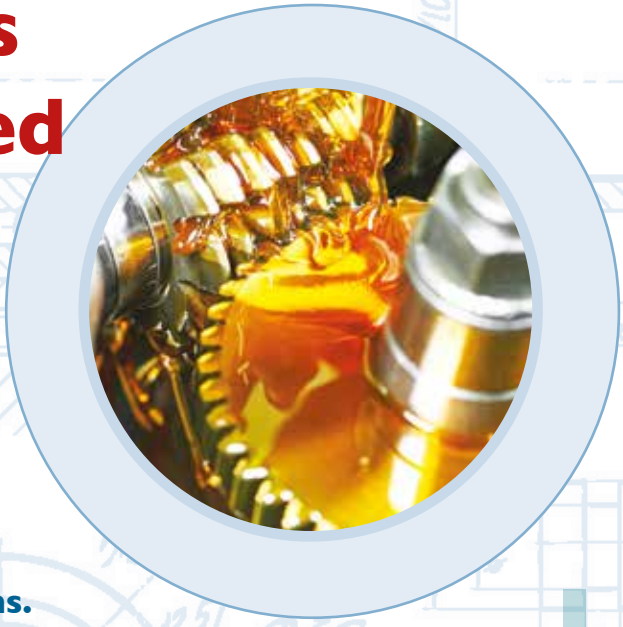
Bechem products will work for you – excellent products with a sound cost benefit profile and the backup you need for your applications.

GBR Technology - Vacuum Fluids Range

GBR Technology Ltd formed as the fluids and greases offshoot of CVC Scientific Ltd. Our GBR branded vacuum oils have a heritage that goes back over 50 years. They are amongst the finest refined vacuum oils available and we ship these to customers around the world. Our GBR branded oils are complimented by the branded oils and greases we offer through our distributorships e.g. Krytox™, Apiezon, Bechem and Anderol®.

Product	Description
Convoil 20	A cost effective highly purified hydrocarbon vacuum fluid for diffusion and vapour booster pumps that offers many of the characteristics of more expensive fluids but at a very competitive price.
CVC 4	Tetramethyltetraphenyltrisiloxane based fluid showing excellent heat, oxidation and radiation resistance. It provides fast pump down times with good ultimate pressure characteristics.
CVC 4 Ultra	Highest purity and quality tetraphenyltetramethyltrisiloxane available with reduced potential for crystal formation
CVC 5	Pentaphenyltrimethyltrisiloxane based fluid with excellent pressure characteristics, ideal for ultra-high vacuum applications. Extremely low back streaming rate.
GBR 16	Based on a severely hydro-treated mineral oil suitable for rotary vane pumps. ISO 32.
GBR 45	A synthetic hydrocarbon, PAO, especially recommended for hot running rotary vane pumps.
GBR 60 ***GBR 90***	Economy grade hydrocarbon oils suitable for rotary vane pumps. ISO 68 and 100 respectively.
GBR 70 ***GBR 110***	Water white mineral oils specially formulated for their hydrophobic properties. Allows for the pumping of water vapour without emulsification. Excellent chemical stability in aggressive conditions. ISO 68 and 100 respectively.
GBR 19	A highly purified hydrocarbon fluid formulated with anti-oxidant additives for rotary pump use.
GBR 101	Formulated from refined mineral oils with an anti-oxidant additive for use in direct drive pumps. ISO 100.
GBR 70 Ultra	Narrow cut severely hydrocracked base oil with anti-oxidant additives to provide extremely low vapour pressures for maximum pump efficiency. ISO 68.

Ensuring your bearings are optimally lubricated for the job in-hand



GBR's Technical Manager, Alan Follett discusses the correct specification of greases for bearing lubrication

Correct lubricant selection for bearing applications.

All too often, when either speculatively reviewing, or upon invitation – we identify that the incorrect lubricant has been selected previously.

By incorrect – this could be in terms of the base oil type or viscosity, or the additive pack, or even the grease stiffness/thickener type.

The reality is that it is not possible to solve 100% of the requirements of any particular application with any one oil or grease.

A 'good' lubricant choice may work well in any given application, but an optimum choice will work better, provide better protection, and better asset life.

The objective is to make an informed decision on the best lubricant taking into account as many of the operating conditions as possible.

Specing for an existing application

If looking to replace an incumbent oil or grease, it's not always appropriate to offer 'an equivalent' to what is currently being used. There may be operational issues resulting from the incorrect selection of base oil viscosity or additive type, and offering an equivalent product will only replicate the same error, perceived poor performance from the lubricant, and damage to equipment and reputation.

In this article, we are going to focus on the importance of selecting the correct base oil viscosity for any given bearing application.

ISO VG46, ISO100 etc viscosity references applied to oils – but what does that actually mean? ISO stands for 'International Standards Organisation', responsible for influencing all manner of industries to produce high quality, reproducible and safe materials from child seats, through food safety and medical supplies, energy provision, etc etc. 'VG' stands for Viscosity Grade - the respective number denotes the kinematic viscosity

of the oil, in cSt (mm^2/s) @40°C. This '@40°C' is very important to understand, as it does not immediately indicate how the lubricant will behave at lower, or higher temperatures.

Viscosity increases as temperature reduces and decreases as temperature increases. All this viscosity '@ 40°C' really does is provide a benchmark figure to identify the basic properties of the oil in the grease, and allow comparison of grades both with the same, and different manufacturers.

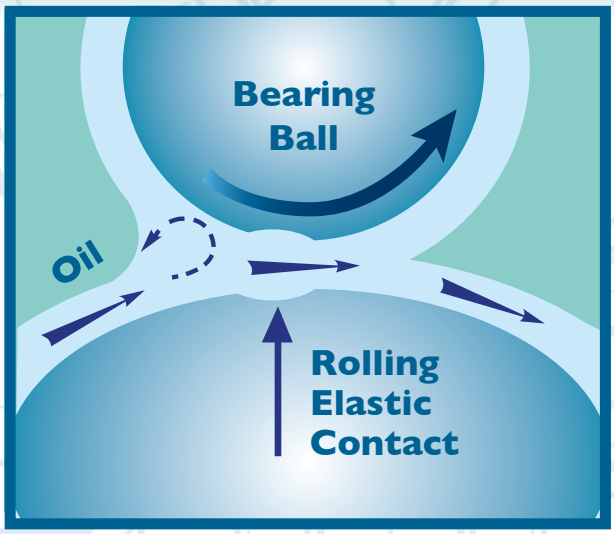
Specing a base oil for a grease

Greases are far and away the most regularly selected type of lubricant for the vast majority of rotating element (bearing) lubrication. Grease is intended to 'stay where it's put', and not flow away from the lubrication site. It is important to understand that it is the oil within the grease which is the primary component which provides the lubricating film. The thickener (can be a metallic soap, eg: lithium complex; or PTFE, or polyurea etc) is purely present to provide the grease structure – to keep it 'in place', and does not provide any lubrication.

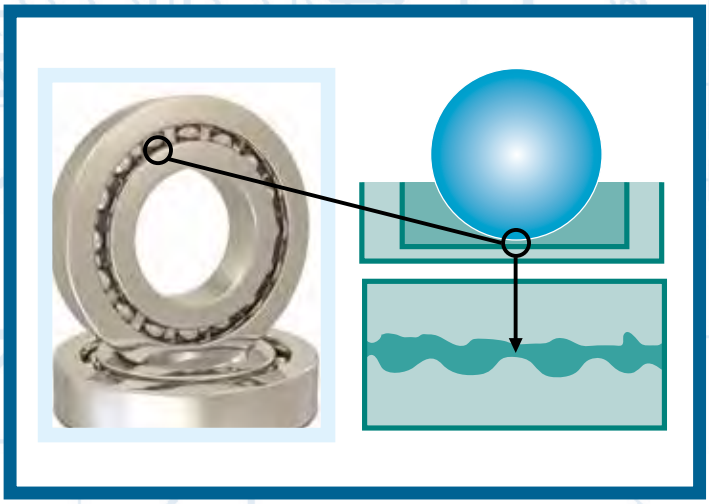
Various bearing housing configurations are designed into equipment, one of the considerations being to provide a 'reservoir' of grease to service the bearing in operation. Grease does away for the need to install bypass pipes, filtration, oil cooling systems etc which are both costly, and space-consuming for oil-fed lubrication systems.

So, if we have identified grease is the way to go, how do we select the best grade according to base oil from the myriad of options available?

The target for any given application is to achieve a lubricant film thick enough to maintain full fluid separation, this ensures the rotating surfaces are kept separate to minimise wear caused by metal-to-metal contact – this is called elasto-hydrodynamic lubrication. This is the result of the fascinating phenomenon whereby the viscosity of the oil film wedge between rolling elements and raceway dramatically increases under applied pressure, forming the thick stable lubricating film.



Graphic 1 - *depicts elastohydrodynamic fluid lubrication – the lubricant film 'wedge' is generated between the ball and the inner raceway. Also indicated (in exaggerated form) the elastic deformation of the metal surfaces which occurs under applied pressure. This all helps to contribute to the space available for lubricant film to form.*



Graphic 2 - *above depicting the surface asperities apparent at microscopic levels which are effectively separated by suitable lubricant fluid film*

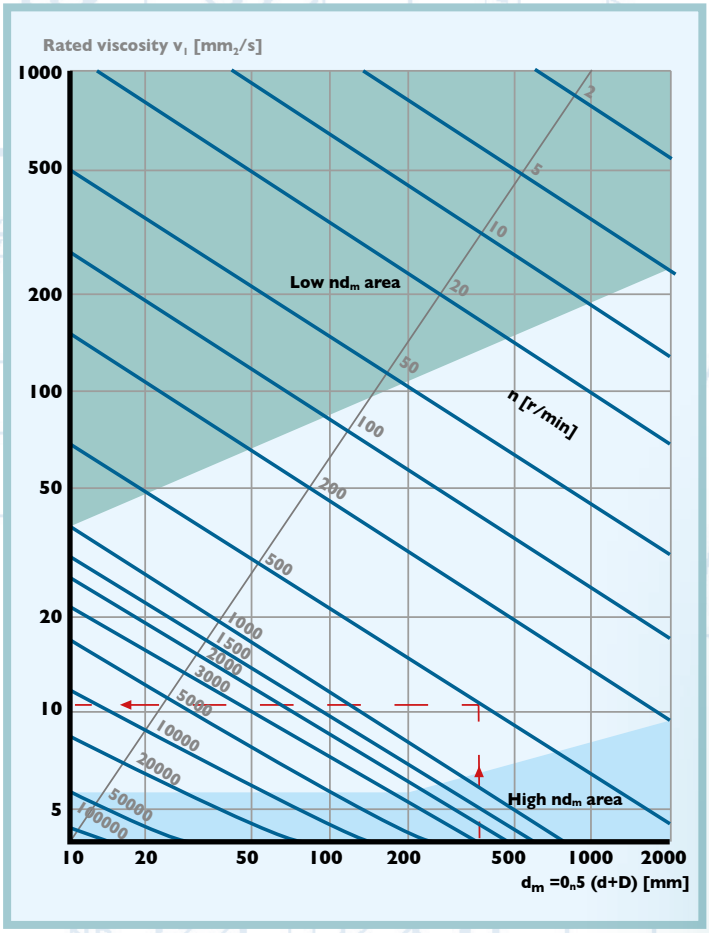
A range of information is needed to specify the correct grade of lubricant:

- Bearing specification – a series of letters and numbers which identify the bearing type, eg: deep groove ball bearing, spherical roller bearing etc etc. Key bearing information needed is the Outer Diameter (OD), and Internal Diameter (ID) of the bearing [as we need the mean (average) diameter of the bearing], the rotational speed of the bearing in operation, and operating temperature.
- Temperature – operating, and including extremes. This is absolutely vital, as the steady-state running temperature should be used for determining the base oil viscosity. Extremes of temperature should also be taken into account – what are they in terms of low and high, and how long does the bearing operate under these considerations compared to steady-state?
- Also we need to pay heed to any qualification test temperatures set by the customer, these may be different to the actual operating temperatures, but need to be taken into consideration to get the recommended grease qualified.
- Technical information, to both identify bearing types, and to identify required base oil viscosity.
- This data is then input either in the following charts or the online-SKF calculator, which then indicates the required lubricant viscosity.
- This confirms the minimum viscosity ***at operating temperature*** required to allow the lubricant to maintain full fluid separation, this is ensuring the rotating surfaces are kept separate to avoid/minimise wear caused by metal-to-metal contact.
- So, a bit like baby bear's pudding, this ensures the film thickness to be just right – not too thin, and not too thick

Let's now take an example! We have a bearing with an average diameter of 400mm, rotational speed of the system is 500rpm and operating temperature is 70°C.

We refer to Graphic 3 using this average diameter and rpm which then indicates the required viscosity at operating temperature of 11cSt.

We then input this information into Graphic 4 where we cross-reference the 11cSt and 500rpm info to identify which VG grade of oil will provide this 11cSt @70°C.

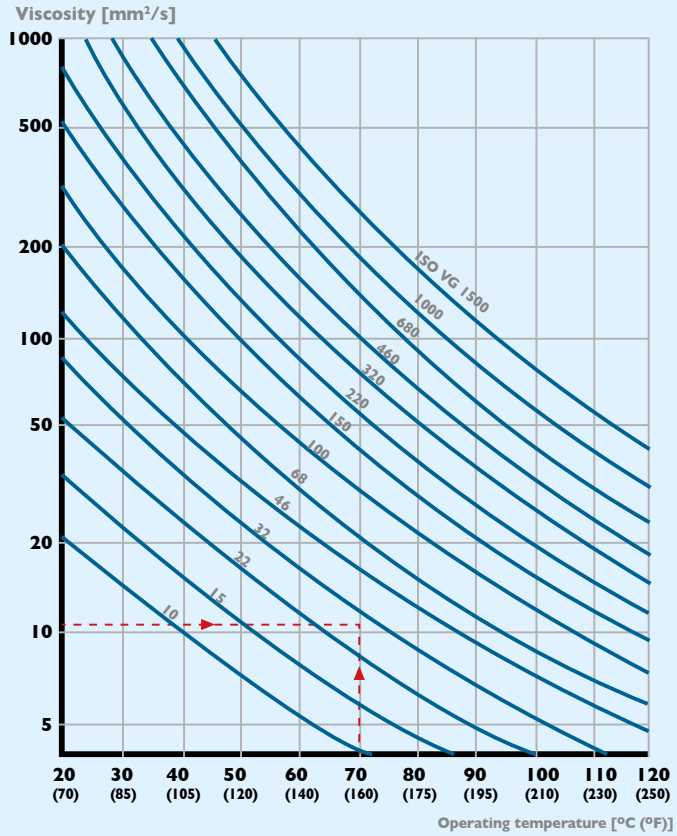


Graphic 3 - *Identifying required viscosity at operating temperature from bearing diameter and rotational speed information*

This example suggests ideally a grease with a VG rating of between 22 and 32 (cSt @40°C)

In such a case, or where there is some doubt about viscosity grade, then it's always best to go up to the next grade, this provides a safety margin. The practical consequence is that the bearing may run a little hotter initially due to viscous churning of the grease, but this increased temperature will effectively reduce the viscosity back closer to where it needs to be. If a viscosity grade too low is selected, then the film thickness generated will be insufficient to maintain full fluid separation between the metal surfaces, leading to metal to metal contact, increased wear, increased temperatures and consequential viscosity 'run-away' - oil thins dramatically, and premature bearing wear and results.

Graphic 4 - *Identifying appropriate VG Grade of grease to provide the required viscosity at operating temperature.*



So, this article has given some insight into the importance of, and considerations needed to select correct base oil viscosity of a bearing lubricant. This leads us on nicely to consider other parameters in the next edition (base oil types/pros+cons/grease additives/thickeners and relative functionality of components).

Lubricant Base Oils

Mineral oils used in lubricants and greases are formulated with various additives to confer various properties. Additives may include antioxidants, extreme pressure additives, corrosion inhibitors, dispersants and a number of other additives as required for the product to perform its function and meet the performance requirements of a number of specifications and standards.

Although the additives play a vital role in the performance of the lubricant, so too does the type and quality of the base oil and for any product type e.g. hydraulic fluid, the base oil type will relate most strongly to longevity, quality and also price.

Base oils have been classified by the American Petroleum Institute (API) into 5 internationally recognised base oil groups. Hydrocarbon mineral oils, produced from refining of crude oil fit into Groups I, II and III, whilst synthetic fluids made from polyalpha olefins (PAO) comprise Group IV. All other base oil types, be it esters, silicones, poly alkylene glycols (PAGS), fluorinated materials etc. fit into Group V.

A word of caution - the term semi-synthetic can be very misleading when applied to base oils in the UK. It may refer to a Group III highly refined base oil, or a combination of synthetic PAO base oil (Group IV) with a lower group base oil. It could be possible to argue that a product is semi-synthetic if it contains 1% PAO in combination with 99% of a Group I base oil, this would be a relatively low quality product but calling it semi-synthetic would convey a high quality image. Most suppliers would be responsible when they describe a product as semi-synthetic but it could be an important point to ask your supplier what they mean by semi-synthetic and get an answer that satisfies yourself, since different semi-synthetics can have a very wide difference in the overall base oil quality.

Recycled oils may also be used on occasion. Recycling oil can involve re-distillation or other processes including filtration. Re-distillation would generally give a higher quality recycled oil but may have a sharper odour from the additional heating step on already used oil. Recycled oils are very cheap of course and some lubricants will contain a % of recycled oil as standard.

Let's look at Groups I, II and III which are the mineral oils that have been refined to different levels:

Group I: These use a solvent refining process where some of the aromatic and chemically unsaturated components of the oil have been removed. The process is a solvent wash and a significant amount of unsaturated material and some sulphur compounds are left in the base oil. The oil will have an appreciable colour and odour. The oil will have a relatively low viscosity index. The viscosity index is a measure of how much the base oil viscosity will change with temperature - a low VI means a bigger change in viscosity with temperature. High VI is desirable since the lubricant properties will change less over a wider temperature range. For example, think of an engine oil that needs to perform on start up in winter when it might be very cold and then that same oil performing well when the engine is up to its normal running temperature. With the exception of recycled oils, these are the cheapest base oils on the market.

Group II: These base oils typically get the unsaturates content down further by using a hydrotreating process. This chemically reacts some of the unsaturated materials with hydrogen and turns them into saturated materials. The base oils have less odour, less colour, fewer unsaturates, less sulphur and higher viscosity index. It's important to note that the unsaturated material in base oil is more reactive than the saturated material, over time, especially at high temperature, it will oxidise and the oil will become acidic and begin to break down, this can affect viscosity and form varnishes and sludge. This can further lead to corrosion and a drop off in performance.

Group III: These base oils use additional steps to further refine the oils. Processes include hydro-isomerisation to reduce the unsaturates, and iso-dewaxing, the latter being a chemical process to render liquid some of the waxy material present in the oil and so benefit low temperature performance. An additional claimed benefit to highly refined base oil is better response from the additives used with them.

Products based on more refined base oils are more expensive than those based on solvent refining alone but they have superior properties. Refined products will give better equipment protection and longer service life, in many cases these cost benefits more than cover the extra cost. An oil that runs for twice as long but only costing 50% more will be cheaper on oil costs - but that's far from the whole story. If you consider lower replacement filter costs, less maintenance, better protection and longer machinery lifetime then the benefits can be very significant. It's a shame however, that in the majority of cases the decision is taken to go with the cheapest base oil due to the lower price. Generally however across industry and transport, Group II base oils are now produced and used in the largest volume, this is a large shift from just a few of years ago when Group I base oils predominated. In order to see some of the benefits of the more refined products then maintenance schedules would need to be lengthened, this may go against the manufacturers recommendations and would almost certainly invalidate warranties during the warranty period. Sticking to the same maintenance schedule may still give the benefit of better machinery protection but the cost benefit wont be so compelling and this may be one of the key reasons behind the choices made in some cases.

Group IV and Group V: If we look beyond Group III to Group IV we enter the category of poly alpha olefin products. These materials are essentially synthetic hydrocarbons made from ethylene (which is then polymerised to make longer chain materials) and have very good properties but at significantly higher prices.

Group V Fluids: Are any chemistries that are not in the other four groups and cannot be said to be superior – they are just different. Some of the chemistries have exceptional properties whilst some might be inferior in other aspects to the fluids in the other groups.

Biodegradable Oils

Biodegradable oils are normally esters such as natural plant oils e.g. rapeseed oil or synthetic esters derived from plant material. However other chemistries and materials can be used in biodegradable lubricants. Biodegradability is normally determined for lubricants in relation to an OECD 301B test (modified sturm test). This laboratory test exposes the material under test to a bacterial inoculum and measures carbon dioxide evolution. A material is classified as readily biodegradable if at least 60% of the theoretical carbon dioxide that could be released by its biodegradation is released within 28 days under the test conditions.

Q&A

MD Paul Morris
Answers questions on the culture at GBR Technology

So Paul, how would you summarise the culture at GBR Technology?

We are a friendly, knowledgeable team with a genuinely strong customer focus. Most organisations would claim to have this customer focus and I think in many respects our industry scores fairly high in this area but since I started here 15 years ago – I've seen this in a quite marked way at GBR. We are all trying to do our best for our customers – it drives us and we treat others as we want to be treated ourselves, so down to earth honesty. We want customers to come back year after year, so good service and fairness are key to this too.

What does that really mean for the customer?

I think they will find us pretty flexible and fast to respond. We like to get back quickly and we have some really in-depth knowledge within the organisation. We answer over 95% of our phone calls in 5 rings or less and you are straight on to a person. We had a new phone system installed around 5 years ago. The installers were to set it up so you could be presented with options to select – that's what most organisations would do but we know that we prefer to go straight through to someone responsive who can take the call right away – so that's what we did and it works well!

How do the products you offer reflect your culture?

Our focus is on high quality, we do have a few price fighter grades but generally we are about offering the BEST products. The best products last longer, protect assets better, result in less downtime, these are often the lowest cost option for the customer when all things are considered (not just the price per litre). Brands such as Krytox™, Anderol®, Bechem and Apiezon – these are industry leading and it makes us proud to be selling these. We know they perform when the going gets tough and product quality is never an issue with these materials. Customers benefit from these products and they are a joy to use as well. We all know it, you buy a top quality garment and it lasts three times as long as a cheap one, so in the long run it costs you less and you get so much more pleasure from using it!

And in summary?

We are here to serve our customers – quick responses, very high quality technical advice, care with your orders, advanced products you can rely on, good stock levels and a willingness to discuss further stock-holding where this is required. These are all things that will benefit your business. In short we care about our customers and take pride in doing our best for you. It benefits us of course in return – our lubricants business continues to grow and each year we are servicing more and more customers!

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