

The role of Group II Base Stocks in Europe

At the 21st ICIS World Base Oils and Lubricants Conference in London this past February, Ted Walko, Global Basestocks and Specialties Marketing Manager, ExxonMobil, delivered a presentation titled "The Role of Group II in Europe." While on stage, Ted shared ExxonMobil's three, core beliefs about Group II in Europe: one, lubricant manufacturers will benefit from local Group II supply; two, Group II is well-designed to meet the latest/upcoming performance specifications; and, three, now is the time to begin planning a transition to Group II. A summary of Ted's presentation follows.



The rise of Group II is largely driven by the advancement of engine and higher-end industrial oil performance needs. Because a base stock is the largest part of a finished lubricant's formulation, it has a significant impact on the lubricant's physical properties, performance and overall cost.

Often referred to as the industry's "work horse," Group II meets a wide range of applications and it's cost-advantaged to manufacture – because of this, finished lubricant manufacturers are increasingly demanding Group II base stocks.

While the industry has seen an overall shift to Group II base stocks, its penetration has regionally varied – North America led the charge, while Europe was slower to adopt. In the past, European base stock needs were largely met by Group I and Group III products. Unlike North America and Asia-Pacific, Europe has lacked affordable and reliable Group II supply, making it costly to market these base stocks due to a heavy reliance on imports from areas like the Gulf Coast.

Today, base stock demand in Europe is changing due to OEM production plans, car population turnover and shifting consumer buying behaviours. By 2030, ExxonMobil projects that more than 50 percent of Europe's overall base stock demand will be for Group II products¹.

Over the next fifteen years, projections show that base stock growth will slow down in Europe and North America (roughly, growth will be only one percent per year globally). Given this, there is intensified pressure to deliver a cost-effective, high-performance

product. Because Group II is produced by hydrocracking and catalytic dewaxing technology, these base stocks require less additive treatments, which can enable cost savings.

Due to all of these factors, ExxonMobil noted the opportunity to invest in Europe to help meet growing market demand. In 2015, the Basestocks team announced the plan for a new hydrocracker unit at ExxonMobil's Rotterdam, Netherlands, refinery. The hydrocracker will produce EHCTM Group II base stocks and ultra-low sulphur diesel and is on track and on time for production to begin in late 2018.

While Europe will greatly benefit from the local Group II supply through ExxonMobil's Rotterdam refinery, the company believes that there are advantages for the entire global market. When Rotterdam is up and running, ExxonMobil is confident it will be the only global producer with significant manufacturing assets strategically located in three continents, that are committed to producing Group I and Group II base stocks. With ExxonMobil's global EHC Group II slate available on three continents, ExxonMobil believes that local blenders will no longer need to recertify their products in each region, reducing complexities and saving time and money.

Group II is uniquely diverse in the number of applications it can serve and this will only continue to expand with time. Whether it's for commercial, industrial or automobile applications, Group II offers enhanced oxidative stability, reduced volatility, and superior low-temperature performance, helping lubricants meet the most rigorous technical requirements.

These rigorous technical requirements will likely become more commonplace over time. It's extremely important for European lubricant manufacturers to be mindful of upcoming OEM specifications and have a thorough understanding of the implications on a lubricant's product life cycle.

Currently, there are base stocks on the market well-suited for ACEA-12, but, the specification is in the decline phase. The new ACEA-16 specification is now in the beginning of the growth phase, so, there is maximum value to be captured by converting to Group II at this time. Of note, ExxonMobil's EHC Group II base stocks are designed with a high level of compatibility with current engine oil and other finished lubricant specifications, including ACEA-16. While this is just one example, this principle should be considered for all situations involving conversions and upcoming specifications.

That all said, there is no one-size-fits-all approach when it comes to base stock conversions. Transitions to Group II should take place at a time and pace most appropriate to individual finished lubricant manufacturers operations.

In today's complicated industry environment, lubricant and base stock manufacturers in Europe have a number of hurdles to leap over. The lubricant market will continue to evolve, globally and regionally, as newer specifications and more stringent regulations come to the surface. To address these continual market shifts, it's important for companies to remember that while manufacturing and technology assets are important, these resources must be coupled with deep industry knowledge and experience.

ExxonMobil's Rotterdam refinery investment is a good example of this principle, and a testament to the company's commitment to the industry. The decision to invest in this region and specifically, the Rotterdam refinery, involved counsel from numerous ExxonMobil experts over the course of many years.

By studying long-term projections and analyzing which locations were advantageous, ExxonMobil was highly disciplined in its decision of where and when to invest.



While Group I will still remain relevant for specific applications, Group II is becoming the work horse of the global industry, and with a stream of reliable Group II supply to be introduced through the ExxonMobil Rotterdam refinery in 2018, ExxonMobil is confident that Group II will become the true heart of the European base stock needs.

LINK

<http://exxonmobil.com/Basestocks>

¹ Source: ExxonMobil assessment of publicly available information.

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