

# Lubricant Blending and Quality Assurance

by David Whitby

Many people, including those involved in the manufacturing, marketing and selling of lubricants, believe that blending is simply a matter of putting one or more base oils and several additives into a tank of some kind and mixing them. However, blending lubricants that meet customer's demands requires much more than this. In my new book I discuss how the correct ingredients of the right quality must be used in precisely controlled quantities. I look at how, in order to manufacture high quality lubricants, high quality ingredients, suitable equipment, correct procedures and methodologies, standardised testing, appropriate packaging, correct storage conditions, a well trained workforce and excellent management, are all vital.

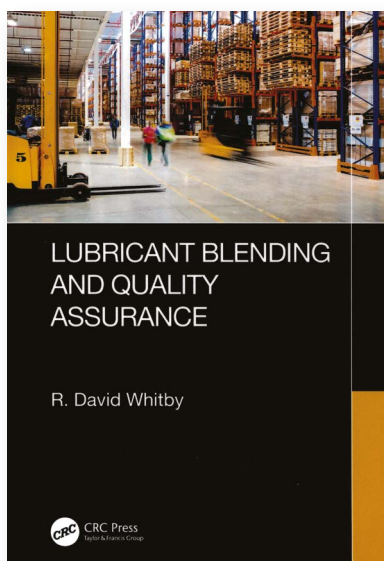
I examine the numerous types of base oils and additives used to manufacture lubricants and classify them into two broad groups; mineral oils and synthetic oils. There are significant differences within the base oils in each group and there is no single 'universal' base oil that will be suitable for use in all lubricant applications.

Many hundreds of additives are used in the formulation of different types of lubricants. My book explains why they are used, the main types of additives, their functions and the variable physical and chemical properties of different classes of additives. The fundamental importance of these differences to the operation of a lubricant blending plant is also explained.

I discuss how and what goes into formulating a lubricant (selecting which base oils and additives to use) and I explain why this can be important in making a product easier or more difficult to blend. The methodology of formulating, developing and testing a new or improved lubricant is complicated and time consuming. Chemists and engineers do not just select a base oil or additive because it happens

to be available or low cost. Selecting which base oil(s) and additives to use for a specific lubrication application requires experience, skill, testing and refinement.

Having discussed the ingredients and recipes for lubricants, the book focuses on how and why blending plants are designed. Many factors and a huge amount of market specific, technical, logistical and process information must be gathered and evaluated before the design of an efficient and profitable lubricant blending plant can be successfully completed.



Producing and delivering high quality lubricant products requires careful management. Strategies and activities have been developed and improved over many decades and the culmination has been the publication of the ISO 9000 series of standards. In the book's final chapter I discuss the principles and methodologies of Total Quality Management, with a specific focus on ISO 9000, 9001 and 9004.

My book is for everyone involved in supplying high quality lubricants

to customers. It is designed to enable all participants in the company's supply chain to achieve their goals so it's vital that everyone involved understands the role played by each of the participating groups. Without the skills, experience, communication and understanding of everyone involved in the manufacturing, marketing and delivery process, attaining consistently high quality lubricants' products is far more difficult to achieve.

**LINK**  
[www.crcpress.com](http://www.crcpress.com)