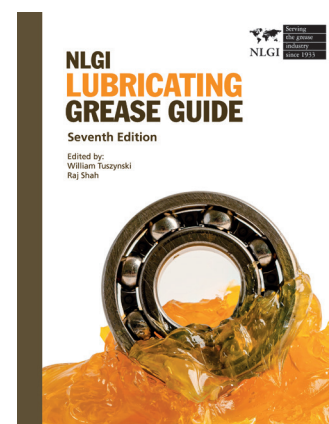




NLGI PUBLISHES UPDATED GREASE HANDBOOK : A MUST HAVE FOR PRODUCERS, MARKETERS AND USERS OF GREASE

Lubricating greases are composed of a stable dispersion of a discontinuous phase, such as a thickener, in a continuous phase, which would refer to a base oil. A carefully balanced blend of these two components formulate the majority of the modern lubricating greases that are widely utilized in various industries worldwide. Despite the ubiquity of lubricating greases, the quantity and quality of technical literature that pertains to these greases is quite lacking. In an effort to address this issue, the recently published NLGI Grease Guide presents itself as a promising technical resource for those interested in learning about greases.



The National Lubricating Grease Institute (NLGI) was founded to foster cooperation in the exchange of technical information and to provide resources relevant to the needs of the global grease community. The NLGI Lubricating Grease Guide, written and edited by industry veterans affiliated with NLGI, is meant to serve as an introduction to a wide spectrum of grease-related subjects for those new to the field and a reference for industry experts. The fundamental principles of fluid lubrication are commonly understood, but certain aspects of grease application, formulation, and manufacturing prove to be less conspicuous. Consequently, NLGI presents intensive grease education courses to cover this subject area and this guide is meant to supplement these courses.

The new NLGI Grease Guide functions as a reference to users, formulators, manufacturers, and marketers of greases during the conduct of their daily business and as an educational source for the less technical student. It is meant to be a resource for those inside and outside the industry to acquire the basic understanding of key points regarding grease formulation, manufacturing, and use troubleshooting, rather than being an in-depth reference about lubricating greases. The chapters have been sequenced purposefully to guide the reader through the subject of grease in a logical manner. However, each chapter is capable of being a standalone resource, which may be helpful for quick referencing.

In Chapter 1, Waynick provides a historical overview of greases through the introduction of the earliest lubricating greases, followed by general descriptions for simple soap-thickened greases, complex soap-thickened greases, and non-soap-thickened greases. Chapter 2 focuses on the characteristics of lubricating greases, as Dr. Fish details the evolution of single-purpose greases to multipurpose greases, along with an extensive breakdown of various grease components. Meanwhile, Dr. Anoop Kumar et. al. explores the testing techniques used to evaluate lubricating greases in Chapter 3. This comprehensive chapter covers the significance, test methods, and instrumentation for testing various grease properties, such as flow, low-temperature, high-temperature, heat resistance, thermal/oxidative stability, service life, oil bleed, storage life, water resistance, corrosion/rust resistance, friction, wear, etc.

In Chapter 4, Sander and Budd lay out the formulation and process development for lubricating greases through systematic steps of conceptualizing, planning, chemistry/engineering, and storing/shipping/selling. Subsequently, the processes and equipment used for manufacturing greases is detailed by Dr. Taylor et. al. in Chapter 5. This chapter also highlights the efficiency of continuous grease manufacturing, along with providing further descriptions for manufacturing soap-thickened greases, non-soap greases, specialty thickeners, and additives. On a different subject, Dr. Frias and DeMedeiros provide a basis for the design and operation of the processing facility for food-machinery lubricants for Chapter 6.

Chapter 7 features an overview of the handling and dispensing of grease, covered by Miller, which includes grease packages, grease package pumps, intermediate bulk containers, bulk delivery, grease storage, grease dispensing, bulk storage, pumping, and flow control. Chapter 8 focuses on grease selection, and in that chapter Quinn and Booker discuss when to lubricate with grease, discuss details on energy-saving lubricants, appropriate grease selection based on application, automotive grease requirements, hidden costs, and grease compatibility. Chapter 9, presented by Kernizan, provides a simplified approach to solving grease application problems, which includes a component application approach and an environmental condition-centric approach.

In Chapter 10, Coe outlines two different NLGI production certifications, which include "ASTM D4950 Standard Classification and Specification for Automotive Service Greases" and the newer High-Performance Multiuse (HPM) grease specifications. Chapter 11, Adams presents a discussion about environmentally acceptable lubricants (EALs), as Adams details sustainability programs and standards, such as the USDA BioPreferred Program, European Standard EN 16807, VGP/VIDA, Ecolabel, etc. Finally, Chapter 12 covers grease health, safety, and environment requirements. In this chapter, Edwards-Zollar explains hazard communication, the globally harmonized system (GHS), labeling of chemical labels, safety data sheets, chemical inventory requirements, transportation of hazardous materials, hazard determination, handling and disposal of waste greases.

When co-editors Bill Tuszynski and Dr. Raj Shah were contacted they commented, "The new Seventh Edition of NLGI's Lubricating Grease Guide is a significant upgrade over previous editions. At double the length of Volume 6, added topics include a guide to formulation strategy, NLGI's historical ASTM D4950 GC/LB and new HPM specifications, a discussion of the requirements for Environmentally Acceptable Greases, and an expanded discussion of greases for Food Machinery Lubricants. In addition to being part of a whole, each chapter serves as a stand-alone review of the subject matter. We believe the new NLGI Lubricating Grease Guide is a must-have for producers, marketers, and users of grease along with suppliers to the industry."

The NLGI Lubricating Grease Guide contains a wealth of information pertaining to nearly all aspects of lubricating greases. It is apparent that each chapter was carefully written and reviewed to provide the reader with relevant information in a deliberately concise and clear manner. This guide will likely prove to be an invaluable resource about lubricating greases for industry veterans and newcomers alike. It is competent as a standalone reference, in addition to being an excellent supplementary resource for educational grease courses as well. As a profound piece of technical literature, written by industry experts from a wide range of companies, The NLGI Lubricating Grease Guide is a highly recommended read for anyone interested in greases and is an essential reference document in any industry professionals' repertoire.

Author

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