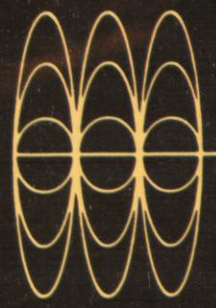


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BUSINESS INF. BUR.  
CORPORATION FILE

# Lubrizol<sup>®</sup>



MARKETING ● MANUFACTURING ● TECHNICAL SERVICE



# The Lubrizol Corporation

The Lubrizol Corporation is the world's largest independent organization engaged in the development, manufacture, and marketing of chemical additives designed specifically to improve the performance characteristics of petroleum lubricants and fuels. Lubrizol's activities extend also into the field of specialty products, such as additives for marine diesel oils, hydraulic fluids and industrial lubricants; rustproofing compounds; and chemicals for industry.

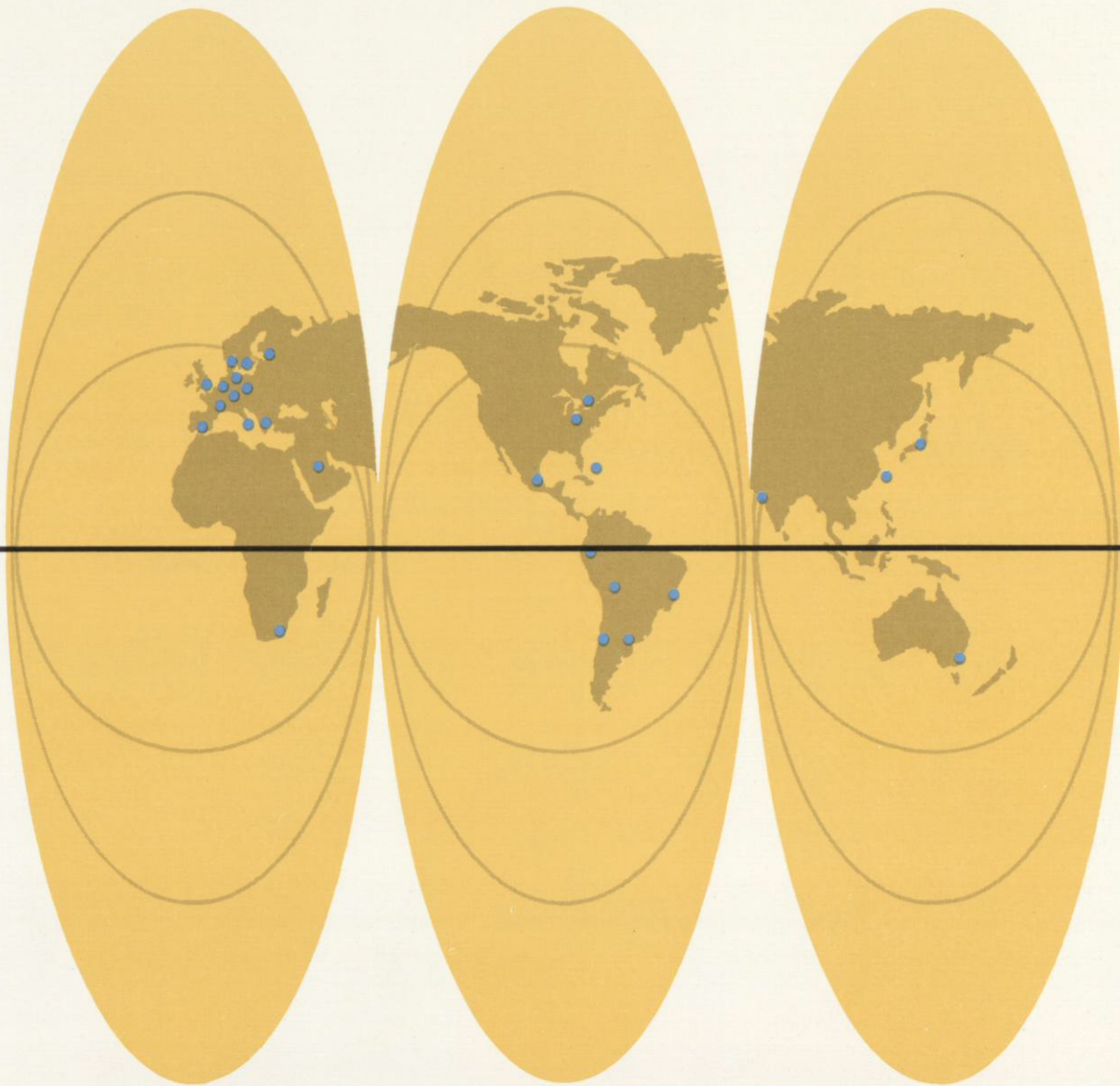
## **Lubrizol products include:**

- Crankcase Oil Additives**
- Gear Oil Additives**
- Oxidation Inhibitors**
- Corrosion Inhibitors**
- Automatic Transmission Fluid Additives**
- Marine Diesel Additives**
- Industrial Oil Additives**
- Gasoline Additives**
- Fuel Oil Additives**
- Specialty Oil Additives**
- Chemical Products**
- Rustproofing Compounds**
- Viscosity Index Improvers**

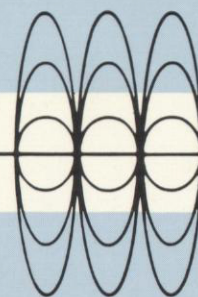
Austria  
Denmark  
England  
Finland  
France  
Greece  
Iraq  
Italy  
Norway  
South Africa  
Spain  
Sweden  
Switzerland  
West Germany

Argentina  
Bahamas  
Bolivia  
Brazil  
Canada  
Chile  
Mexico  
Peru  
United States

Australia  
India  
Japan  
Philippines  
Taiwan



# Research and Development



Lubrizol's extensive research and development facilities are constantly engaged in cooperative work with the petroleum industry in the fields of lubricants and fuels. The result is a continued improvement in performance properties of

products which are required to keep abreast of the engineering advances of equipment manufacturers. A high level of research and product development activity maintains the company's emphasis on the production of quality products.



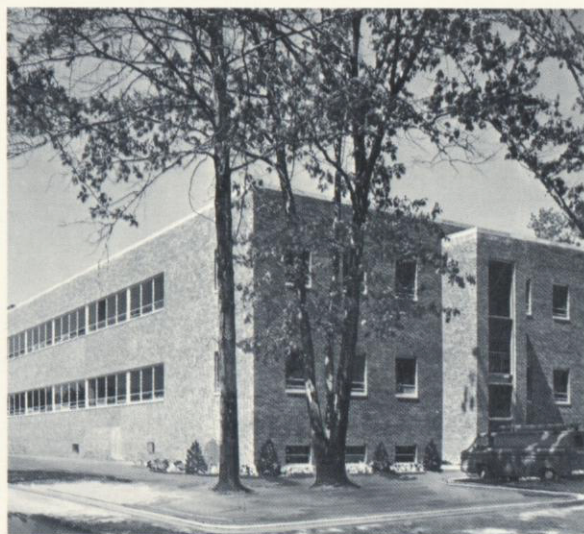
X-ray Diffraction Unit



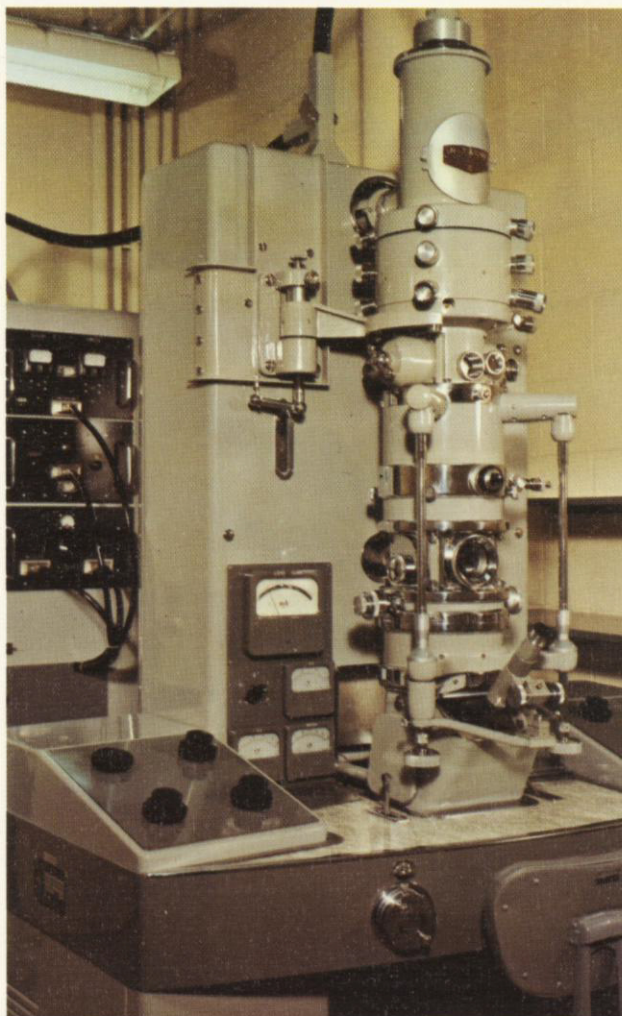
Quantometer-Automatic Recording  
Emission Spectrograph

Technical service efforts provide customers with balanced chemical formulas for fuels and lubricants. These chemicals, when combined with specific base stocks, give optimum performance and economy. Lubrizol personnel are specially trained in the fuel and lubrication field and can personally supply customers with recommendations to solve their problems promptly and efficiently.

The organization, facilities, and services of Lubrizol are described in the following pages. You are invited to use them to your best advantage.



New Polymer Research Building,  
Cleveland, Ohio

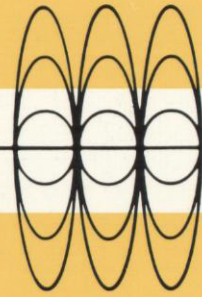


Electron Microscope



Chemical Research Building, Cleveland, Ohio

# Manufacturing Facilities



Lubrizol serves its customers from the following manufacturing and distribution centers:

**U.S.A. – Cleveland, Ohio • Painesville, Ohio • Houston, Texas**

**AUSTRALIA – Sydney**

**JAPAN – Taketoyo**

**BRAZIL – Rio de Janeiro**

**MEXICO – Monterrey**

**CANADA – Niagara Falls, Ontario**

**SOUTH AFRICA – Durban**

**ENGLAND – Bromborough**

**SPAIN – Huelva (under construction)**

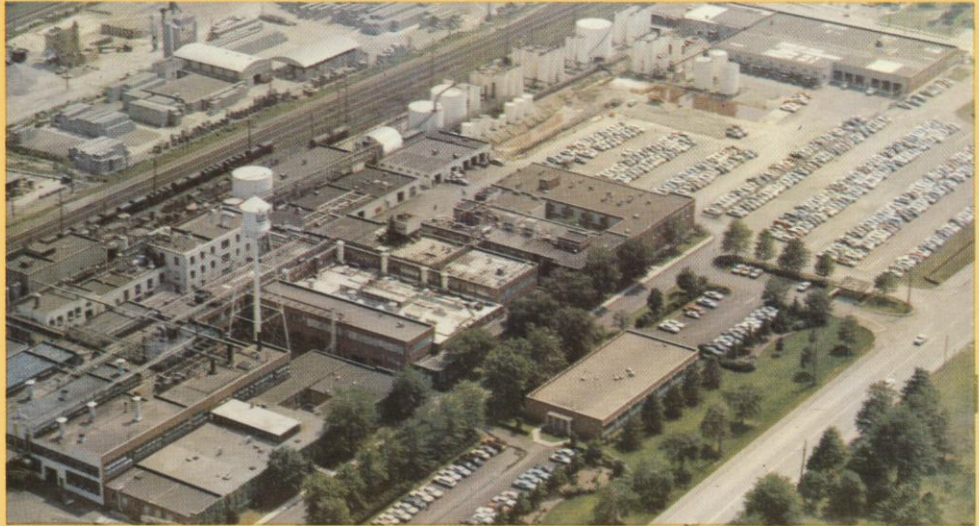
**FRANCE – Rouen**

**SWEDEN – Gothenburg**

**INDIA – Bombay (under construction)**



Cleveland, Ohio

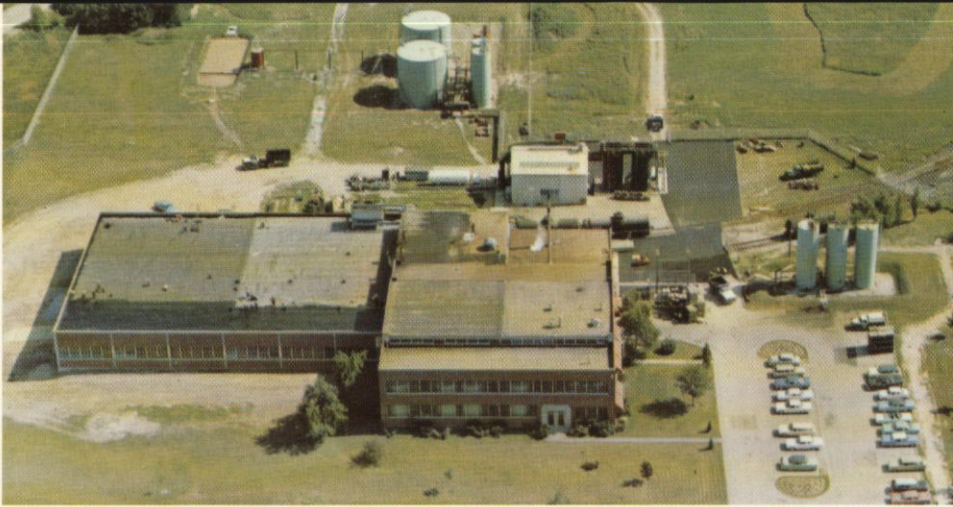


Painesville, Ohio

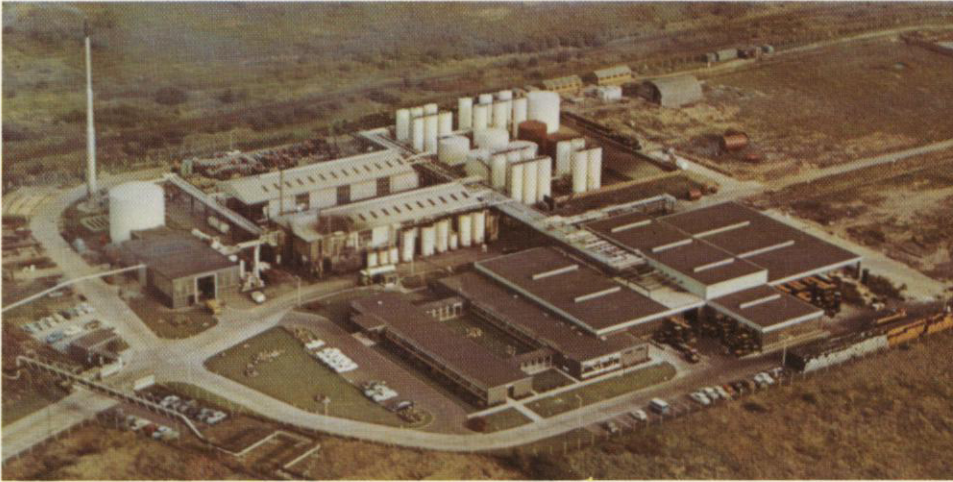


Houston, Texas

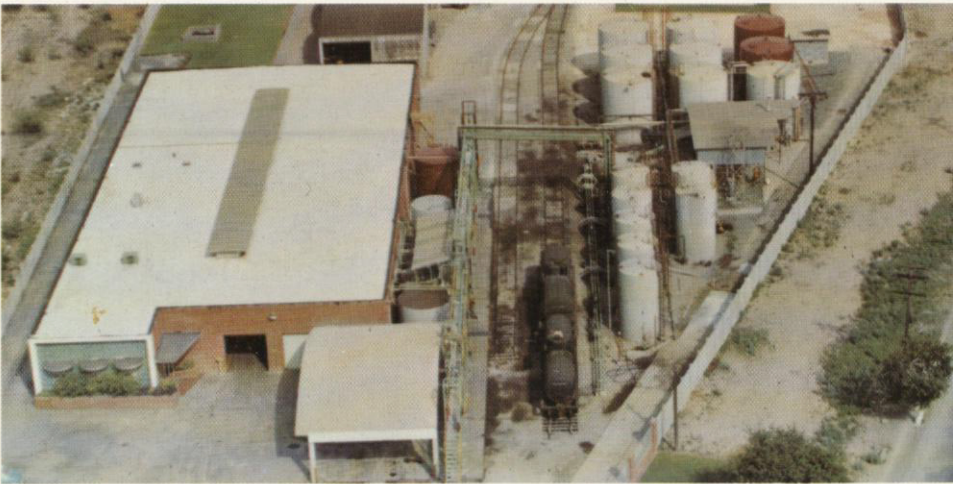




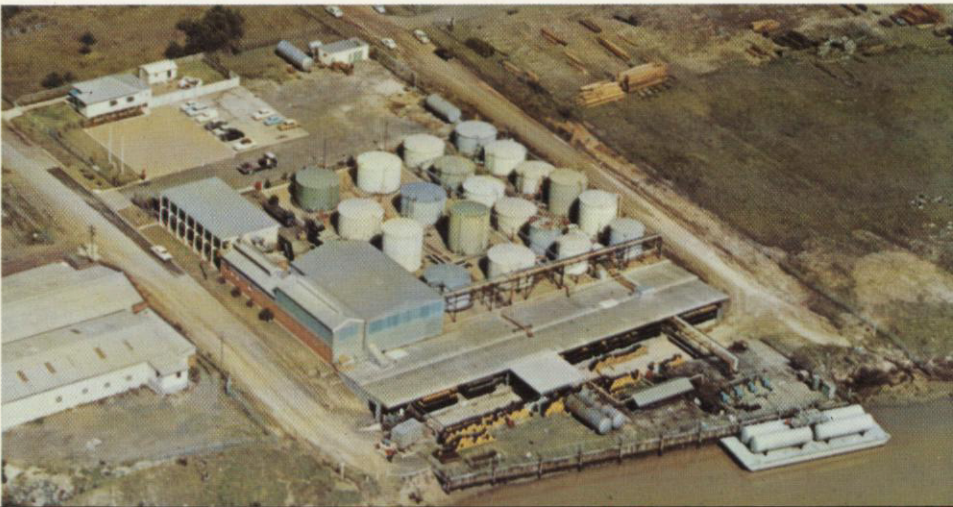
Niagara Falls, Canada



Bromborough, England



Monterrey, Mexico



Sydney, Australia

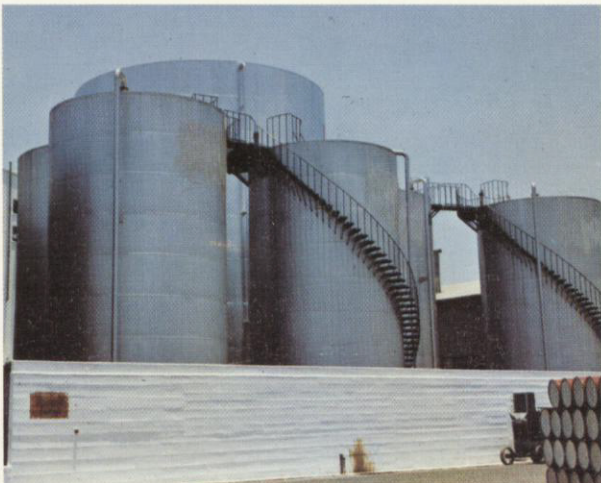


The strategic plant locations provide customers with convenient sources of supply, thereby minimizing freight costs, transit times, and product inventories. One important result is a reduction in customers' working capital requirements. In addition, those companies engaged in world-wide operations are assured of products of uniform quality, regardless of the location of their blending terminals. Another advantage is the elimination of import and currency exchange problems in the purchase of additive products.

Any Lubrizol product from one plant is the same as a similarly designated product from any other plant. Product quality and uniformity are controlled by a continuous program of chemical analysis and performance tests from raw material to finished product. As an important facet of this program, Lubrizol's Quality Control Department in Cleveland uses actual engine tests to evaluate products from each plant. This department establishes and maintains a rigid standard of quality for all Lubrizol products, wherever manufactured.



Rouen, France

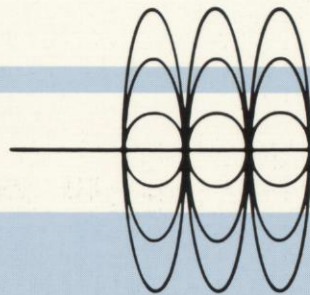


Rio de Janeiro, Brazil



Taketoyo, Japan

# Mechanical Testing and Product Evaluation

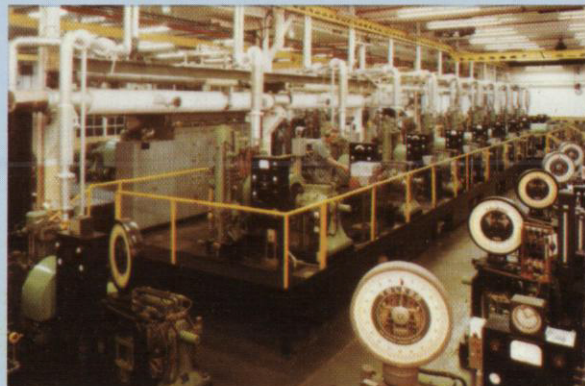


Lubrizol's principal laboratories and technical centers are located at Cleveland, Ohio, and Hazelwood, England.

Many types of equipment, ranging from relatively simple chemical apparatus to large multi-cylinder engines, are found at both laboratories. These are operated for the benefit of all customers in improving the quality of their products.



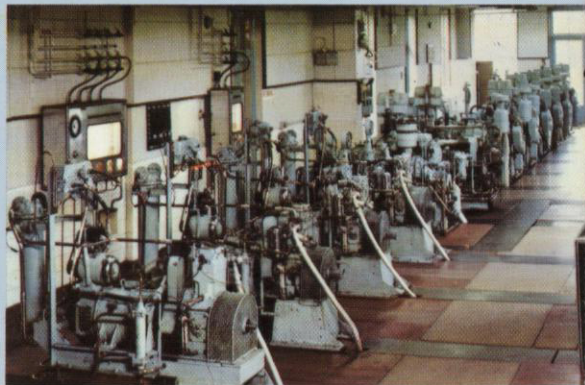
Data Acquisition System Control Center  
Cleveland, Ohio



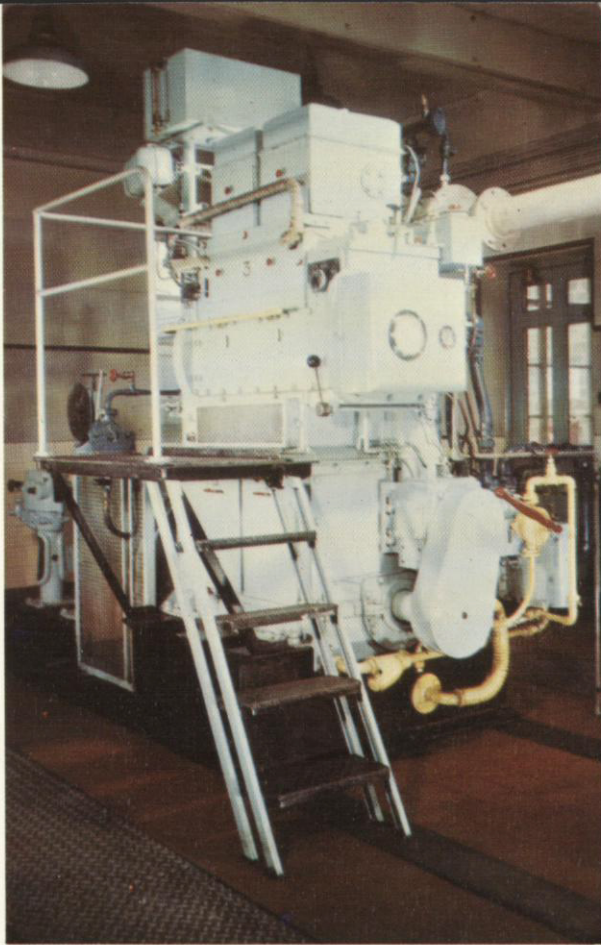
East Wing, Mechanical Testing Laboratory,  
Cleveland, Ohio



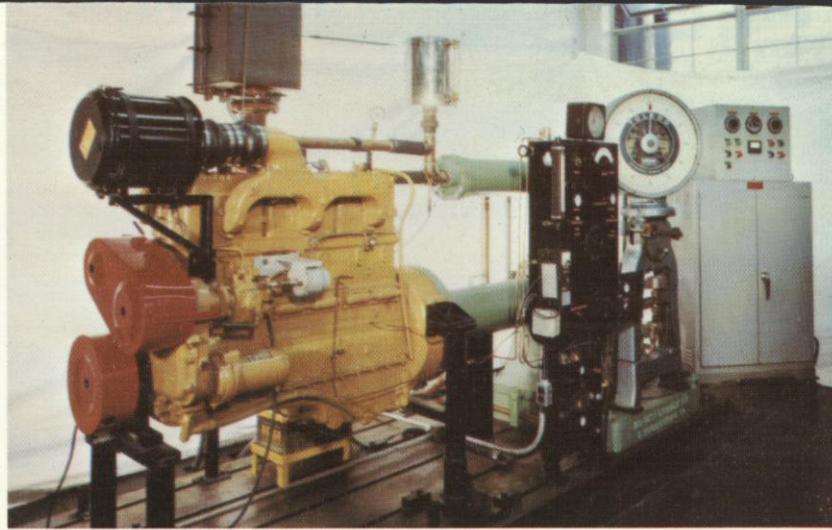
Mechanical Testing Laboratory, Hazelwood, England



Petter and Caterpillar Engines,  
Hazelwood, England



Bolnes Marine Diesel Test Engine



Cummins Diesel Test Engine

Laboratory test facilities are expanded periodically to provide means for evaluating the ability of lubricants and fuels to meet new and more severe performance requirements. The Cleveland and Hazelwood laboratories have been officially authorized by the U. S. Ordnance Department and the British Ministry of Supply to carry out all engine tests required to qualify oils under their various specifications.



Marine Diesel Service Trial



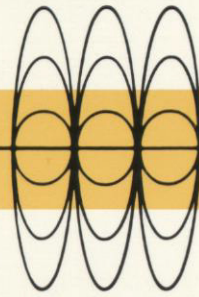
Taxicab Field Test



Fiat Field Test

Lubrizol supplements its laboratory work with an extensive program of field tests. For instance, in a recent five year period, fleets of vehicles owned, leased or operated by Lubrizol accumulated more than 100 million test miles. These field tests made it possible to evaluate our many products under all types of conditions. It is in this way that the value of Lubrizol's products is finally proved before they are offered commercially. Whether in the laboratory or in the field, the emphasis is on service to the customer—service which is rapid and thorough.

# Marketing

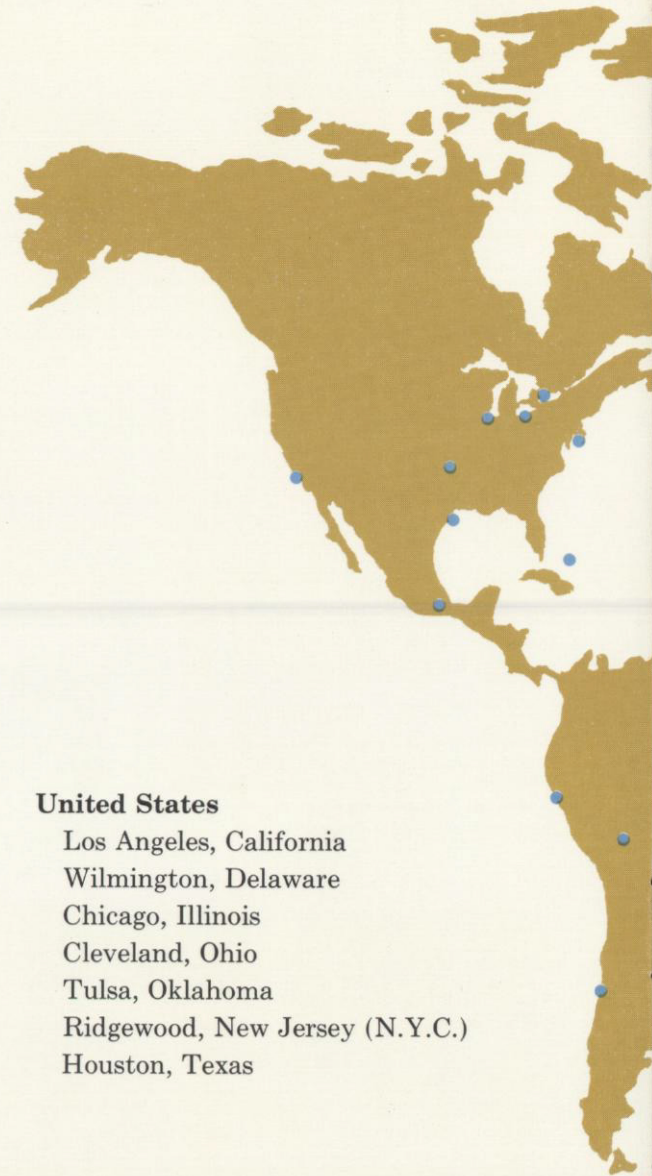


Lubrizol's marketing personnel are located in the principal commercial centers of the world. They are not only close to their customers, but are also in constant communications with Lubrizol's manufacturing and technical service centers.

Sales personnel receive intensive training in the field of lubricating oil and fuel additives. In this training program, particular emphasis is placed on product application and performance as it relates to customer problems. Through technical bulletins and periodic visits to our research and technical service centers, sales personnel become familiar with the newest products and the most recent testing techniques. As a result, Lubrizol has a corps of specialists who are well qualified to assist customers in the development of improved petroleum products.

The organization is designed to give the managers of local Lubrizol offices great flexibility in dealing with customer requests. Recommendations for the solution of a lubrication problem can be made by these managers.

The map on these pages shows the location of Lubrizol offices. Ample warehouse stocks of widely used Lubrizol products are carried at most of these locations to meet the immediate needs of our customers.



## Marketing Headquarter Locations

**Buenos Aires, Argentina**  
**Melbourne, Australia**  
**Sydney, Australia**  
**Vienna, Austria**  
**Nassau, Bahamas**  
**Brussels, Belgium**  
**La Paz, Bolivia**  
**Rio de Janeiro, Brazil**  
**Toronto, Canada**  
**Santiago, Chile**  
**Copenhagen, Denmark**  
**London, England**  
**Helsinki, Finland**  
**Paris, France**  
**Athens, Greece**

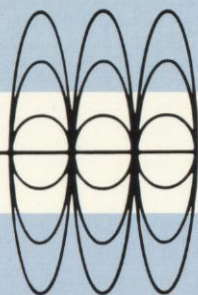
**Bombay, India**  
**Baghdad, Iraq**  
**Milan, Italy**  
**Tokyo, Japan**  
**Mexico City, Mexico**  
**Oslo, Norway**  
**Lima, Peru**  
**Manila, Philippines**  
**Durban, South Africa**  
**Madrid, Spain**  
**Stockholm, Sweden**  
**Cham-Zug, Switzerland**  
**Taipei, Taiwan**  
**Hamburg, West Germany**

### United States

**Los Angeles, California**  
**Wilmington, Delaware**  
**Chicago, Illinois**  
**Cleveland, Ohio**  
**Tulsa, Oklahoma**  
**Ridgewood, New Jersey (N.Y.C.)**  
**Houston, Texas**



# The Future

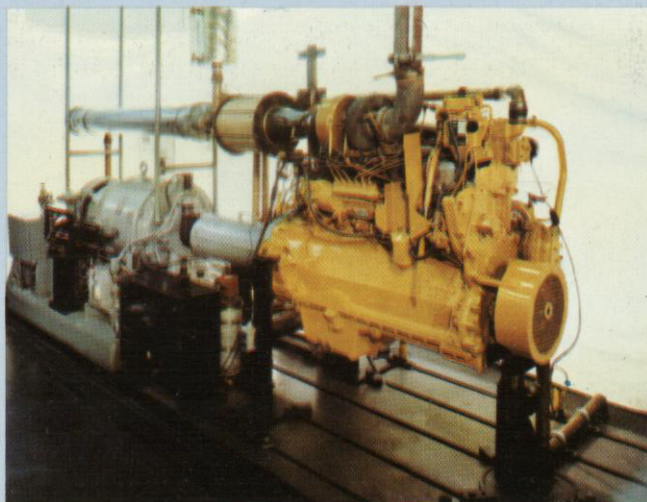


The future of Lubrizol depends on the continued cooperation and good will of the oil and chemical industries. We sincerely appreciate the business received from our customers, and we believe that our plans for the future will merit their continued support.

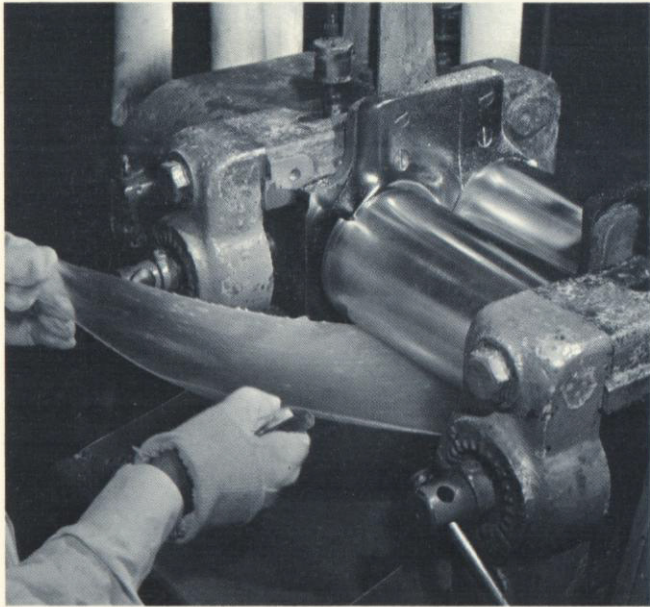
Constant advances in equipment design place continuous new demands upon lubricant and fuel performance. The personnel, facilities and services described in this brochure are entirely at your disposal. We will do everything possible to assist you in developing and maintaining your products at the maximum quality level required to meet all new performance specifications.

## **Expansion of Technical Service Facilities and Activities**

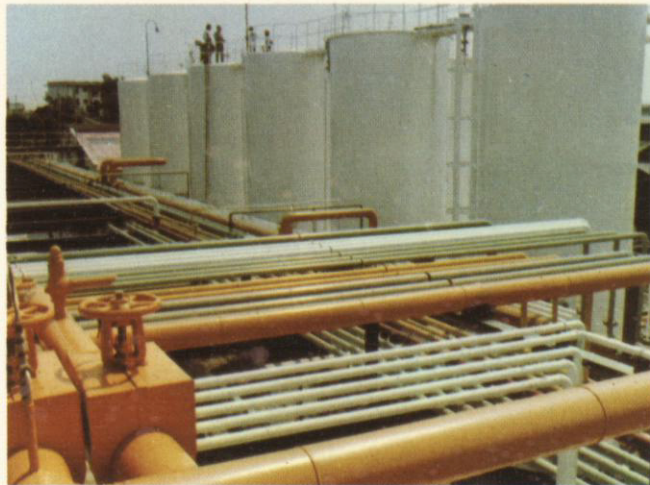
Lubrizol is continually expanding its engine test facilities at Hazelwood, England, and Cleveland, Ohio, in order to provide more rapid technical service. Lubrication problems of particular interest to each geographic area receive special attention. For the purpose of such studies, a number of engines from different parts of the world have been installed in the Lubrizol Laboratories at Hazelwood, England.



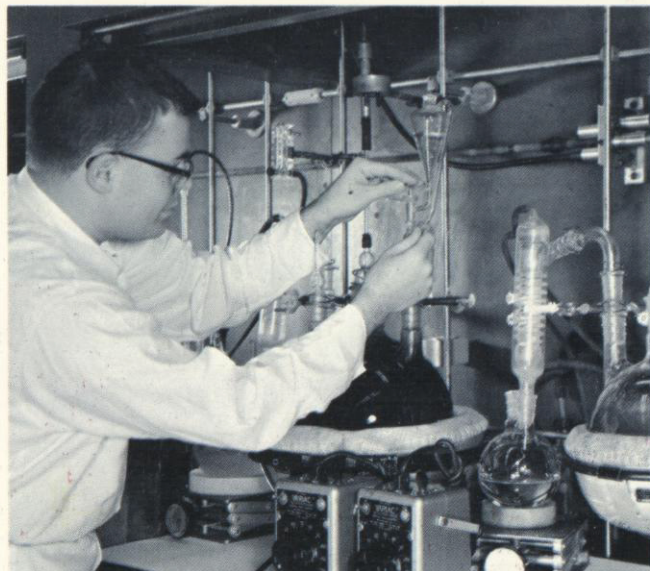
Multi-Cylinder Caterpillar Diesel Test Engine



Plastics Mill, Applications Research Laboratory



New Manufacturing Facilities, Taketoyo, Japan



Exploratory Research

## **Intensified Research and Development Activities**

During the past eight years we have more than tripled the size of our chemical research facilities. Lubrizol's modern laboratories include new equipment specifically designed to assist in the development of products to meet diversification goals.

## **Improved Manufacturing and Distribution Facilities**

Manufacturing facilities are constantly being enlarged to meet customer requirements and to provide facilities for new products. As the industrialization of other areas of the world advances, Lubrizol assists in this progress by building new plants in strategic areas. Distribution facilities are also established in rapidly developing new areas to give customers all the advantages of local supply.

## **Personnel**

One of the most important aspects of Lubrizol's expansion program is the development and training of personnel to give prompt, personal assistance to customers in solving their lubrication problems. New sales offices are being opened and their staffs are being enlarged to provide improved local service for our customers.



• THE LUBRIZOL CORPORATION • CLEVELAND, OHIO 44117 •