

Storage and Handling of Lubricating Oils and Greases

Care is required to preserve product quality during storage and handling. Contamination and oil degradation due to improper or inadequate handling procedures add unnecessary costs to an operation.

The following suggestions are designed to help preserve lubricant quality during storage and handling.

Indoor Storage

Storage temperatures should remain moderate at all times. The storeroom should be located away from possible sources of airborne contamination such as coke dust, cement dust and similar forms of grit or soot. The storage building should be kept clean at all times, with regular cleaning schedules being maintained. This also applies to dispensing equipment.

Contamination and confusion of brands are two key risk factors that must be managed when handling partially full containers and dispensing equipment. Order and organization is critical to success. Dispensing equipment should bear a label that matches the container from which it was filled. Labels on all equipment and containers should be kept legible at all times. Drying oils, such as linseed oil, should not be stored in the same store as lubricants.

Never use the same dispensing equipment for both detergent oils and rust- and oxidation-inhibited turbine and hydraulic oils. Trace contamination of lightly additized industrial oils with detergent engine oils can substantially impair the quality of the industrial oils. Potential performance problems that can result include foaming, filter blocking and emulsion formation.

Never use the same dispensing equipment for oils containing zinc-based additives with those that are zinc-free. This is especially important in applications that contain silver components because zinc additives attack silver components.

Do not use galvanized containers to transport oil. Many of today's industrial oils contain additives that can react with the zinc of the galvanizing to form metal soaps that can clog small oil passages, wicks, etc.

Outdoor Storage

In general, outdoor storage should be avoided. Repeated exposure to water and large temperature changes increases the risk of contamination or oil degradation.

Problem	Cause	Solution
Water contaminates product in bulk tankage	Water enters through vent or hatch Water condenses on inner tank walls and falls into product	Install elbow onto vent so opening faces down Install seal around hatch cap Implement procedures to regularly measure and drain water from tank bottoms
Water contaminates packaged product	Water enters packages through fittings	Cover packages that must be stored outdoors Ensure all package seals are intact and all fittings are tight Store drums either on their sides with fittings at the 9 o'clock and 3 o'clock positions or Place a block under one side of package so water does not collect around package fittings
Package labels cannot be read	Ink fades after repeated exposure to rain and/or snow	Cover packages that must be stored outdoors Place clear plastic tape over labels of packages that are exposed to the elements

Shelf Life

The shelf life of a product defines the maximum amount of time a product should be kept in storage before use. It begins on the date the product is packaged.

Most lubricant-type products will remain suitable for application after the end of the recommended shelf life, as long as they are stored in accordance with the guidelines given below. If the lubricant is stored outside, the shelf life can be reduced.

Some products are known to be less stable than others due to the nature of the components used to blend them. The shelf life of these products is intentionally shorter. In all cases, procedures should be in place to ensure lubricants are applied before they reach the end of the recommended shelf life.

Packages containing Imperial Oil lubricants include fill codes to help customers understand the age of the product. The key to these fill codes is as follows:

LDDDY TT:TT (most packaged oils)

L represents the location of the Imperial Oil filling plant

DDD represents the number of days since the beginning of the year.

Y represents the last digit of the year.

YYMMBBB (most greases)

YY represents the last two digits of the years.

MM gives the month of production.

Shelf-life information of specific Imperial Oil products can be obtained through our Technical Services Help Line at 1 800 268-3183.

Shelf Life of Lubricants

Product line	Typical Shelf Life	Exceptions
Aviation	5 years	Aviation Piston - 3 years
Automotive	5 years	
Greases	15 years	Argon EP, Estan 0, Rock Drill Grease, Marvelube EP 9F, Valve Grease No.1: 7 years
Industrial Oils	10 years	Refrigeration - 2 years Metalworking Fluids - 5 years Kutwell, Exxcool - 3 years
Specialty eg. Engine Coolant, Windshield Washer Fluid, Solvents	2 years	
Process Oils	10 years	
Waxes	Slack Wax - 10 years Emulsifiable - 2 years	