



## Technical Service Bulletin

**Date:** 11/21/05

**Revision 2:** 8/12/15

**Product Description:** All AMSOIL Products

**Subject:** Lubricant shelf life and conditions affecting duration

### OBJECTIVE:

Provide information to AMSOIL Dealers and customers regarding conditions and strategies for maximizing AMSOIL product shelf life.

### ISSUES:

AMSOIL products are designed to retain their original product performance after reasonable storage periods. However, storage conditions can affect lubricant shelf life, and a general shelf life for an AMSOIL product is difficult to predict closely. Because many factors during storage can affect lubricant performance, AMSOIL is providing guidelines to maximize the time products can be stored and to retain original performance for as long as possible.

### TECHNICAL DISCUSSION:

A number of factors can affect the shelf life of stored lubricants. Contamination is the most common issue. Water intrusion and the migration of water vapor; along with the introduction of foreign materials including cleaning agents, solvents and other lubricants; can cause a lubricant to degrade, resulting in reduced performance.

Storage temperature also impacts lubricant shelf life. The ideal storage temperature is between 32°F and 85°F. Storing products at temperatures significantly out of this range can promote the migration of water, cause additive separation and reduce the effectiveness of additives over time. Due to the higher potential for damage from environmental contamination and temperature fluctuations, lubricants should be stored indoors when possible.

To reduce the possibility of extended storage, the first-in/first-out (FIFO) method should be employed to ensure the oldest inventory is used first, limiting storage time.

### RECOMMENDATION:

#### **Storage Recommendations**

When possible, always store products in their original containers in a clean, dry, moderately temperate area. Lubricants should be stored away from solvents and cleaning agents. It is recommended lubricants be stored in drums horizontally, with the bung caps at the 3 and 9 o'clock positions and the lubricant covering both entrances to reduce the chance of water vapor migration through the bung via

thermal expansion and contraction of the air headspace.

Outdoor storage should be avoided whenever possible. However, if outdoor storage is unavoidable, the following practices should be implemented:

- Protect containers from the elements (direct sunlight, dirt, water, snow, rain, etc.).
- Keep containers off the ground by storing them on pallets.
- Store unopened drum-packaged lubricant containers horizontally (except grease).

### **AMSOIL Product Shelf Life Recommendations**

Product shelf life varies significantly depending on product design, environmental contamination, chemical contamination and temperature. With proper storage, most liquid lubricants can last five years. Because grease can harden or lose its oil content over time, it generally has a storage life of two years. For questions regarding shelf life, call AMSOIL Technical Services at (715) 399-TECH.

### REFERENCES:

Noria DVD: Best Practices for Lubricant Handling and Storage

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