



LUBRICANTS

Webinar Executive Summary

Webinar Title: Lubricants Storage and Handling

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There are five key elements to successful lubricant storage and handling. They are: Keep it Clean, Keep it Cool, Keep it Dry, Know how to Spot Contamination and Instability, and Practice FEFO Inventory Control. Keep it Clean consists of knowing the sources of contamination – air, airborne particles, moisture – and sources such as dirty transfer containers and funnels, and the use of dedicated sealable containers and transfer equipment. Keep it Cool means exposure to temperature extremes can shorten lubricant life in storage, causing product separation or additive degradation. The optimum storage temperature range is 32 – 77°F (0 – 25°C). Keep it Dry consists of excluding moisture from stored product. Water has multiple negative effects on lubricants and equipment. Knowing how to Spot Contamination and Instability means looking at the oil as it is poured or pumped from the container into the machine. Hazy, milky, or gelatinous appearance or an unusual color or odor may indicate contamination or degradation. Practicing FEFO Inventory Management means using the first to expire material first, even if it was not the first received. Production dates and shelf life must be known for each receipt of product.

Good storage practices for bulk oils include proper tank design, dedicated pumps, lines, and hoses, and minimizing cross-contamination through manifolds. For packaged products, all should be stored indoors, away from heat sources and out of direct sunlight. Drums and kegs should be stored on pallets or planks so that they are not in contact with bare ground or concrete floors. Grease containers should be stored upright to minimize oil separation from the grease.

Good handling practices for bulk oil transfers include transportation in appropriate containers or truck compartments with manifolds and unloading lines that can be drained and flushed in accordance with industry standards. Products are to be unloaded into the proper storage tank and in the specified order. The product must be inspected for any signs of contamination when unloading. Samples are to be taken from each compartment and retained for a minimum of six months. The sample must be labeled with the necessary information. Storage tanks and fill lines must be clearly labeled. Tanks must have facilities for periodic cleaning. Discharge lines must also be clearly marked, and dedicated, if possible. Common pumps and lines must be drained and flushed between products. A poster is available to all CITGO marketers that provides all the information necessary to properly



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repackage CITGO lubricants. Packaged products should be stored indoors on pallets or shelves, away from heat sources, out of direct sunlight, and with labels visible. Practice FEFO inventory control. Grease is available in a wide variety of packages, ranging from 3-oz. mini-tubes to bulk trainer loads. The most common grease packages are 400-lb. drums, 35-lb. pails, and 14-oz. tubes. Grease packages should always be stored upright, indoors, out of direct sunlight, and away from precipitation. Minor oil separation from grease in storage is typical, and separated oil should be mixed back into the grease with a clean implement before use. The surface of grease in a container should be smoothed flat to minimize oil separation, and air bubbles should be avoided.

A clean, well-organized lube room promotes proper lubricant handling and application. Dedicated, well-labeled containers should be used for each product. Store lubricants separately from other types of products such as solvents and cleaners.

In cold weather conditions, lubricants and greases should be stored indoors, in a warm environment. Alternatively, bring containers indoors overnight prior to use the next day. Never place a band heater on a grease container.