



Designation: D7718 – 11 (Reapproved 2019)

Standard Practice for Obtaining In-Service Samples of Lubricating Grease¹

This standard is issued under the fixed designation D7718; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the method to obtain a trendable in-service lubricating grease sample from the following configurations including motor-operated valves, gearboxes, pillow-block bearings, electric motors, exposed bearings, open gears, or failed grease-lubricated components.

1.2 In some cases, it may be necessary to take more than one sample from a piece of equipment to obtain more trendable results. Examples of this could be a large bearing that does not fully rotate, such as a slew bearing, or one in which sufficient mixing does not otherwise occur.

1.3 Samples taken in the above manner may need to be mixed to form a more homogeneous sample. This may also be true of other samples such as those taken from open face bearings.

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only. The exception to this is a standard English units thread for which there is no metric equivalent.

NOTE 1—The standard pipe thread referred to is the national pipe thread tapered thread.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.96.04 on Guidelines for In-Service Lubricants Analysis.

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2. Referenced Documents

2.1 ASTM Standards:²

D217 Test Methods for Cone Penetration of Lubricating Grease

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

2.2 ANSI/ASME Standard:³

B1.20.1 Pipe Threads, General Purpose (Inch)

3. Terminology

3.1 Definitions:

3.1.1 *active grease-sampling device, n*—device designed to take an active sample of a lubricating grease from a bearing, gear, or drive shaft located in a grease-lubricated component.

3.1.2 *active sampling, v*—to use a sampling device to actively gather an in-service lubricating grease sample from a grease-lubricated component.

3.1.3 *actuate, v*—to hold the interior cylinder of the active grease-sampling device while pushing the exterior cylinder forward toward the grease-lubricated component that is being sampled allowing lubricating grease to fill the sampling device.

3.1.4 *extension rod, n*—tool used to extend the depth at which a sample is taken with an active grease-sampling device.

3.1.4.1 *Discussion*—The extension rod may also be used to remotely actuate an active grease-sampling device.

3.1.5 *in-service lubricating grease, n*—lubricating grease that has been applied as a lubricant to a gear, bearing, or drive screw for any period of time.

3.1.6 *lubricating grease, n*—semi-fluid to solid product of a dispersion of a thickener in a liquid lubricant.

3.1.6.1 *Discussion*—The dispersion of the thickener forms a two-phase system and immobilizes the liquid lubricant by

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.