Designation: F2163 – 01(Reapproved 2008)

Standard Specification for Ring, Bearing, Inner: for Needle Roller Bearing With Drawn Outer Ring[1]

This standard is issued under the fixed designation F2163; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This specification covers inner rings for needle roller bearings with drawn outer rings.

1.2 The inner rings specified in this specification are intended for use on unhardened shafts in conjunction with open end needle roller bearings shown on Specification F2162 and MS52141.

1.3 The use of recycled materials that meet the requirements of the applicable material specification without jeopardizing the intended use of the item is encouraged.

1.4 The inner rings specified in this specification are not intended for use in flight-critical systems of aircraft.

1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

NOTE 1—This specification contains many of the requirements of MS17130, which was originally developed by the Department of Defense and is currently maintained by the Defense Supply Center Richmond.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

E18 Test Methods for Rockwell Hardness of Metallic Materials

F2162 Specification for Bearing, Roller, Needle: Drawn Outer Ring, Full Complement, Without Inner Ring, Open and Closed End, Standard Type

2.2 *ASME Standard:*

ASME B 46.1 Surface Texture Surface Roughness, Waviness, and Lay[3]

2.3 *SAE Standards:*

SAE AHS STD-66[4]

SAE J-404 Chemical Composition of SAE Alloy Steels[4]

2.4 *Military Standards:*

MIL-STD-130 Identification Marking of US Military Property[5]

MS52141 Bearing, Roller, Needle: Drawn Outer Ring, Caged, Without Inner Ring, Open and Closed End, Standard Type[5]

2.5 *American Bearing Manufacturer's Association (ABMA) Standard:*

STD 4 Tolerance Definitions and Gauging Practices For Ball and Roller Bearings[6]

2.6 *ISO Standard:*

ISO 5593 Rolling Bearings—Vocabulary[7]

3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to ABMA STD 4 and ISO 5593.

4. Ordering Information

4.1 When ordering parts in accordance with this specification, specify the following:

4.1.1 ASTM designation number, including year of issue;

4.1.2 Dash number (see Table 1); and

4.1.3 Dimensions of inner rings, including:

4.1.3.1 Bore diameter, in.;

4.1.3.2 Outside diameter, in.;

4.1.3.3 Width, in.; and

[1] This specification is under the jurisdiction of ASTM Committee F34 on Rolling Element Bearings and is the direct responsibility of Subcommittee F34.04 on Automotive/Industrial Bearing.

Current edition approved May 1, 2008. Published October 2008. Originally approved in 2001. Last previous edition approved in 2001 as F2163–01[ε1] DOI: 10.1520/F2163-01R08.

[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 Global Engineering Documents, 15 Inverness Way, East Englewood, CO 80112-5704, http://www.global.ihs.com.

[4] Available from Society of Automotive Engineers (SAE), 400 Commonwealth Dr., Warrendale, PA 15096-0001, http://www.sae.org.

[5] Available from USA Information Systems, 1092 Laskin Rd., Ste. 208, Virginia Beach, VA 23451.

[6] Available from the American Bearing Manufacturer's Association, 1200 19th St. NW, Ste. 300, Washington, DC 20036–2401.

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