Designation: F1923 – 98 (Reapproved 2014)

Standard Test Method for Tires, Pneumatic, Low Speed, Off Highway[1]

This standard is issued under the fixed designation F1923; 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.

INTRODUCTION

This ASTM Standard has been developed to replace ASTM Provisional Standard PS 86-97. The Provisional Standard was approved so that the U.S. military and other government agencies could continue to purchase tested and qualified tires, until F1923 had been approved. The provisional standard replaced the government's specification ZZ-T-1083, *Federal Specification, Tires, Pneumatic, Low Speed, Off Highway*, under the former Federal Tire Program. That program was discontinued and is replaced by the U.S. Army Tank Automotive Command's Cooperative Tire Qualification Program (CTQP). While fulfilling the military's commercial and tactical needs, the CTQP will continue to serve federal, state, and local agencies that want to purchase qualified tires using this test method.

This test method is designed to be used in conjunction with the Administrator's Approval and Requirements Manual for Tires, Pneumatic, Low Speed, Off Highway (CTQP F1923) (**1**),[2] to qualify tires for purchase by the U.S. federal government, military, and other state and local entities.

1. Scope

1.1 This test method covers measurements for comparative tire strength and dimensional characteristics. This test method covers new and retreaded pneumatic tires, both tube and tubeless types, and flaps when applicable, for mounting on construction, earthmoving, mining and logging equipment, graders, mobile cranes, and similar vehicles operated at low speeds off the road.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[3]

D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

F538 Terminology Relating to the Characteristics and Performance of Tires

3. Terminology

3.1 *Definitions:*

3.1.1 *bead, n—of a tire*, the part of a tire that comes in contact with the rim and is shaped to secure the tire to the rim. **F538**

3.1.2 *groove, n*—a void that is relatively narrow compared to its length. **F538**

3.1.3 *groove (void) depth, n*—measurement of the perpendicular distance from a real or calculated reference defined by edges of two adjacent ribs (lugs) to the lowest point of contact in the groove (void). **F538**

3.1.4 *load index, n*—a numerical code associated with the maximum load a tire can carry at the speed indicated by its speed symbol under specified conditions.

3.1.5 *load symbol, n*—a code associated with the maximum load a tire can carry at the speed indicated by its speed symbol under specified conditions.

3.1.6 *nominal plunger energy, ½ [ML²/T²], n—in tire testing*, one half of the product of a peak force (required to rupture the tire structure in the tread area) and maximum plunger travel into a tire at the time of rupture. **F538**

3.1.7 *outside diameter, n*—the maximum diameter of a tire when it is mounted and inflated. **F538**

[1] This test method is under the jurisdiction of ASTM Committee F09 on Tires and is the direct responsibility of Subcommittee F09.20 on Vehicular Testing.

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[2] The boldface numbers in parentheses refer to the list of references at the end of this standard.

[3] 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.