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An American National Standard

Standard Test Method for Weighing a Bicycle[1]

This standard is issued under the fixed designation F2918; 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 test method covers requirements for weighing and marketing bicycles, including all adult, and childrens bicycles.

1.2 This standard may contain test methods that do not entirely simulate real life situations. The test methods are designed to give reproducible results in a laboratory and, thereby, a means for product comparison.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *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.*

1.5 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

E4 Practices for Force Calibration and Verification of Testing Machines

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *aftermarket, n*—components intended to be fitted to a bicycle but not included as original equipment with the bicycle.

3.1.2 *as-sold bicycle weight, n*—the weight of the complete bicycle with all original equipment as sold to the customer minus any packaging materials and aftermarket accessories. Examples of potential original equipment includes: kickstand, reflectors, chain guards, racks, fenders, pedals, water bottles and cages, etc.

3.1.3 *bicycle, n*—two-wheeled, single-track, articulated vehicle that is solely human powered.

3.1.4 *bicycle frame, n*—the structural member that supports the seat with rear connection for the rear wheel, front connection via the head tube for the fork and lower connection for the crank/pedal assembly.

3.1.5 *minimum bicycle weight, n*—the combined weight of the frame and components necessary to ride the bicycle, and change gears (if bicycle is multi-speed), minus the pedals. Handlebars, stem, brakes, seat, seatpost, and any handlebar coverings are to be included.

3.1.6 *size, n*—the marketed representation of the bicycle frame dimensions that may or may not be determinable from measurement. Examples of sizes are: small, medium, large, 19 inch, 21 inch, 56 cm, 58 cm.

4. Summary of Test Method

4.1 Representative samples of bicycles are weighed on a calibrated scale, using two methods.

5. Significance and Use

5.1 The minimum and as-sold weight of a bicycle are properties used by consumers to evaluate bicycles. The weight may also be used for specifications, manufacturing standards, and quality control.

6. Apparatus

6.1 *Calibrated Scale,* within the weight range of the bicycle.

7. Sampling, Test Specimens, and Test Units

7.1 Test specimens shall be new and in unused condition, selected randomly from a production lot of a given model of bicycle. The bicycle shall conform in all respects to the manufacturer's specifications for the model to be tested with all seals, fluids, and lubricants in place. At least one sample of each size bicycle is required. If multiple samples of the same size are measured, the average is to be reported.

[1] This test method is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.10 on Bicycles.

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[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.

8. Calibration and Standardization

8.1 Test equipment is to be in compliance with Practices E4 and other requirements specific to the equipment.

9. Conditioning

9.1 Bicycle weight testing does not require conditioning.

10. Procedure

10.1 *Minimum Bicycle Weight*—Weigh bicycle, without pedals on the calibrated scale. Record the weight to the nearest 10 g.

10.1.1 Take a digital photo of the bicycle as tested.

10.2 *As-Sold Bicycle Weight*—Weigh bicycle, complete with all accessories minus packaging, as sold, on a calibrated scale. Record the weight to the nearest 10 g.

10.2.1 Take a digital photo of the bicycle as tested.

10.3 Record the serial number of the bicycle tested.

11. Report

11.1 Report the following information (see Fig. 1):

11.1.1 Name of the bicycle manufacturer,

11.1.2 Model, size, and serial number of bicycle tested,

11.1.3 Date and location of the tests,

11.1.4 Name(s) of the personnel conducting the tests,

11.1.5 Whether the bicycle is a production model or a prototype, or pre-production model,

11.1.6 Minimum bicycle weight to nearest 10 g,

11.1.6.1 Digital photo of bike as tested to minimum weight,

11.1.7 As-sold bicycle weight to nearest 10 g,

11.1.7.1 Digital photo of bicycle tested for as-sold weight,

11.1.8 A comprehensive list of all items included in the as-sold bicycle weight, that are not included in the minimum weight,

11.1.9 Any deviations from this test method.

12. Precision and Bias

12.1 The precision of this test method is within 1 %, the specified scale tolerance. The bias of this test method for measuring bicycle weight has not been determined.

13. Keywords

13.1 as-sold; bicycle; minimum; weight