

MIL-W-21985(AS)
 Amendment 2
 10 February 1987
 SUPERSEDING
 Amendment 1
 22 May 1961

MILITARY SPECIFICATION

WHEELS - CUSHION TREAD (SEMI-PNEUMATIC) FOR MOBILE GROUND SUPPORT EQUIPMENT

This amendment forms a part of Military Specification MIL-W-21985 (AER), 13 March 1959, and is approved for use within the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

By this amendment basic specification MIL-W-21985 (WEP) is changed to read MIL-W-21985(AS).

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Paragraph 3.5.1.3, line 1: Add "approximately: after "case", paragraph 3.5.1.5, line 1: Change "MA" to "MS".

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Paragraph 4.1.3, line 1: Add "400" after "every", line 2, add "in a production run" after "produced", delete sub-paragraph (d).

Paragraph 4.3.1, line 1: Change "rated" to "MAXIMUM".

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Paragraph 4.3.1, line 1: Change "inside" to "outside".

Paragraph 4.4.6: Change "thread" to "tread"; sub-paragraph (b), line 1: Change "normal rated" to "MAXIMUM", sub-paragraph (d), change second "D" under "when" to "D1".

Paragraph 4.4.10, delete and substitute:

4.4.10 Roll Test. The sample wheel shall be pressed against a test wheel with an axial load equal to the MAXIMUM load (table 1). At a speed of 22 1/2 MPH \pm 2 1/2 MPH, the wheel shall be rolled for 5 miles, rested for 15 minutes, rolled again for 5 miles, then rested for 30 minutes. This cycle shall be repeated for a period of 8 hours daily for a total of 17 cycles, or approximately 170 miles. Upon completion of the last cycle; the sample wheel shall be loaded with an axial load equal to the RATED load (table 1). At a speed of 22 1/2 \pm 2 1/2 MPH, the wheel shall be rolled continuously for a minimum distance of 150 miles without failure.

Paragraph 4.4.11, line 2, change "rated" to "MAXIMUM" and "25 \pm 2" to "22 1/2 \pm 2 1/2".

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Paragraph 4.4.12.1, line 5, change "leads" to "loads", delete the last sentence.

Paragraphs 4.4.12.2 and 4.4.12.3, delete and substitute:

4.4.12.2 Towing Test Procedure. Under RATED load the wheel, mounted as indicated in 4.4.12.1, shall be towed over the following courses:

- (a) Smooth paved highways for a distance of 100 miles at an average speed of 20 MPH, maximum speed 25 MPH.
- (b) Graded gravel roads for a distance of 50 miles at an average speed of 10 MPH, maximum speed 15 MPH.

The course shall contain such obstacles as rail crossings and door sills. At speeds of 15 MPH, at least 50 right circle turns and 50 left circle turns, both at maximum cramping angle, shall be accomplished during the test. Also, under (a) above, 25 sudden stops shall be accomplished from speeds of 20 MPH.

At speeds of 15 MPH, with an overload of 10% per wheel, the trailer shall be towed over smooth paved surface in a circular path having a 35 foot radius as measured to the outside wheel of the trailer. The trailer shall make 5 complete circles clockwise and 5 complete circles counter-clockwise.

Under MAXIMUM load the wheel shall be towed over the following courses:

- (a) Smooth paved highways at an average speed of 20 MPH, maximum speed 25 MPH, for a distance of 5 miles, rest for 15 minutes, then towed again for 5 miles, rest for 30 minutes. This cycles shall be repeated four (4) times. (Total distance 40 miles - elapsed time 4 1/2 hours).
- (b) Graded level roads at an average speed of 10 MPH, maximum speed 15 MPH, for a distance of 5 miles, rest for 15 minutes, then towed again 5 miles, rest 30 minutes. (Total distance 20 miles - elapsed time 2 hours).

At the conclusion of these tests, the wheel shall be inspected for permanent deformation, excessive wear or damage. Permanent deformation, excessive wear or other damage shall be cause for rejection.

Paragraph 4.5, delete and substitute:

4.5 Loading Table. The following table lists the Model, Size, RATED Load, MAXIMUM Load, and the other Side Load for the wheels produced under this specification.

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TABLE 1, delete and substitute:

TABLE 1

Model No.	Wheel Size	Load Limits		
		Rated Load	Maximum Load	Side Load
I	16 x 4	1000 lbs	1600 lbs	500 lbs
II	21 x 6	1800 lbs	3200 lbs	1000 lbs

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Figure 1, delete and substitute:

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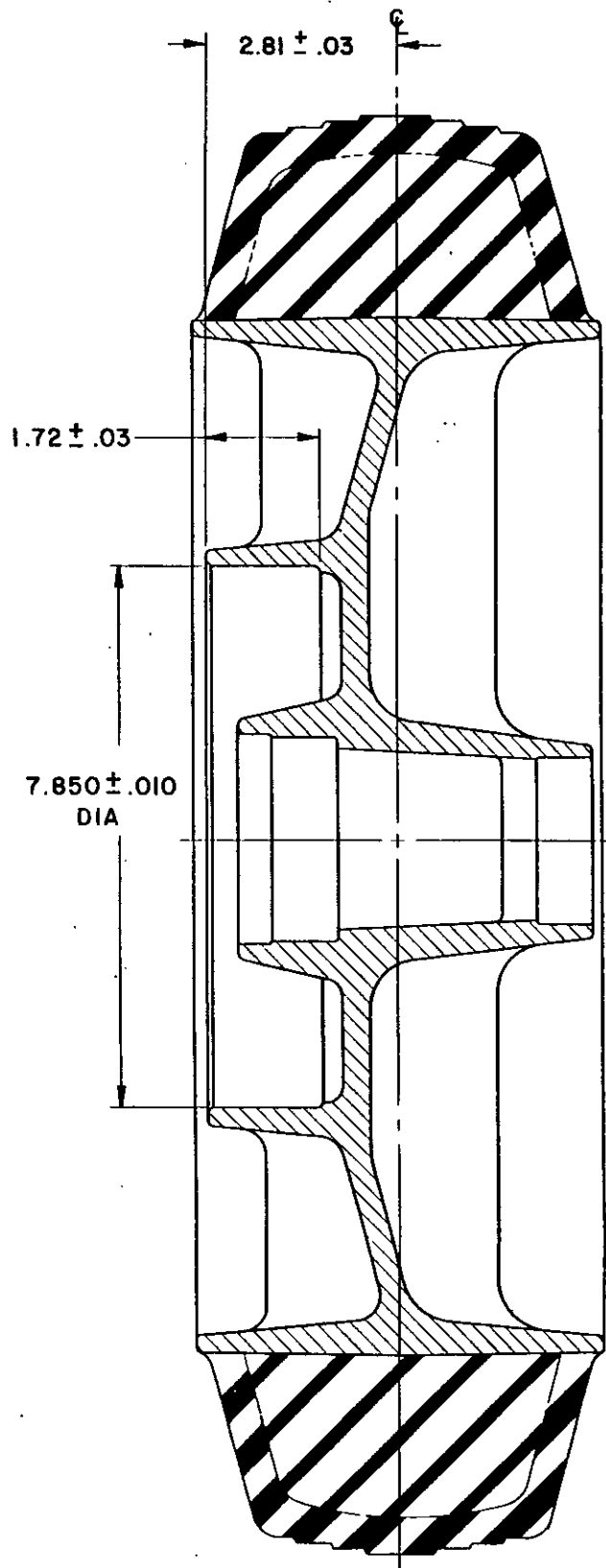


FIGURE 1. Cross sectional-wheel-model II.

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The margins of this amendment are marked with vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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