

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS D-7136
		Former Designation: TMS-7136
TITLE: Cab Retention Straps		CURRENT REV. No.: 1410
		DATE: Oct. 2014
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: TMS-7136 - August 2007
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Updated reference documents; revised Section 4.2.1; removed Section 4.2.3 on Set Length and renumbered following sections; editorial changes.		

1.0 APPLICATION.

This specification covers polyester textile straps that are used as cab retention straps. This material can be produced using various processes as may be dictated by the particular application and/or design.

2.0 SCOPE

This specification covers the general requirements, property and performance requirements, and quality.

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the MPAPS B-50 specification.

3.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard *ISO-9001 or TS-16949*
 NAVISTAR Engineering Design Std. A-16
 NAVISTAR Manufacturing Std. MS-D-13
 FMVSS 571.302
 NAVISTAR MPAPS P-9543

CFR 29, Part 1910
 MPAPS G-9009
 ASTM D 1683
 TMS-9544

MPAPS B-50
 MPAPS A-6, Part I
 MPAPS GT-31
 AATCC Method 30

4.0 REQUIREMENTS

4.1 Material Requirements

4.1.1 Fabric

Shall be made from polyester textile and shall be black or charcoal gray in color.

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4.1.2 Mounting Plates/Support Brackets

Unless otherwise specified, these parts will be fabricated from Steel, Grade 6, Type 550XF, per MPAPS A-6, Part I.

4.1.2.1 Finish

Prior to strap assembly, metal plates/brackets will be painted per MPAPS G-9009, Class II, color NAV0001 Black.

4.2 Property and Performance Requirements

4.2.1 Ultimate Strength

4.2.1.1 Method: Specimens are to be mounted to test apparatus via fixture in such a way to replicate the load vector the strap will experience on the vehicle. Load specimens in tension at a rate of 0.5 in. per second until specimen fails.

4.2.1.2 Required: A minimum of 3 samples to be tested. Failure is to be indicated by specimen reaching its breaking point. Each strap must withstand the minimum load without failure as defined in Table 1:

TABLE 1. Ultimate Strength minimums

Part Number	Load (lbs)
6123113C1	18,700
6123114C1	

4.2.2 Chemical Resistance

4.2.2.1 Required: A minimum of 5 specimens per chemical required

4.2.2.2 Preparation for test procedure: Specimens are to be immersed into samples of each chemical (Table 2) per the following conditions (5 specimens per chemical):

- Step 1. Each specimen is to be exposed to one chemical only.
- Step 2. Each specimen is to remain flat, i.e., not bent or doubled over.
- Step 3. Each specimen is to be immersed in a manner such that all external surfaces are contacted by the chemical solution.
- Step 4. Each specimen is to remain immersed for a minimum of 5 minutes and no longer than 6 minutes.
- Step 5. When specimen is removed from solution, specimen is to be suspended in a vertical orientation to allow excess solution to drain off for approximately 5 minutes.
- Step 6. Specimen shall then be placed into an environmental chamber at a temperature of 170 – 180°F and a relative humidity of 60% - 70% for a period of 12 hours.
- Step 7. Repeat steps 1 through 6 for a total of 5 times for each specimen. Records are to be kept and documentation provided for the following:
 - Specimen number
 - Chemical used
 - Cycle number (i.e., 1 through 6)
 - Date and time that each above step is performed
 - Drying temperature and humidity
 - Duration of drying cycle

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