

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS G-4106
		Former Designation: TMS-4106
TITLE: Seat Belt Hardware – Corrosion Resistance		CURRENT REV No.: 1701
		DATE: Jan. 2017
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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>		

1.0 APPLICATION

This specification applies to the steel hardware contained in seat belt assemblies, normally designated as either attachment hardware (at or near the floor) or other hardware such as buckles, retractors, tongues, and similar metallic parts.

2.0 SCOPE

This specification covers only the finish requirements; mechanical, chemical, and physical property requirements and test methods are defined by applicable Federal, State, and SAE specifications.

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 Specifications, Standards, and Regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949	FMVSS 209
CFR Title 29, Part 1910	ASTM B368
NAVISTAR Supplier Packing and Shipping Std. D-13	ASTM B456
NAVISTAR Engineering Design Std. A-16	
NAVISTAR MPAPS B-50	

4.0 REQUIREMENTS

Parts and assemblies supplied to this specification must meet all applicable requirements of Federal Motor Vehicle Safety Standard No. 209 (FMVSS 209).

4.1 Plating Requirements

Hardware shall be either zinc, or nickel chromium plated steel or fabricated from a stainless steel with a minimum of 11.5% chromium content.

4.1.1 Parts may be supplied with either a bright, semi-bright, dull, or satin finish. The specific finish to be used on a given part or assembly will be determined by IPD Body Group and specified on the Engineering drawing.

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4.2 Post Plating Treatment

1. All electroplated parts shall be free from hydrogen embrittlement. A typical treatment is to bake (within two hours after plating) for four hours at 190-205°C (375-400°F), unless the parts are mechanically plated, in which case no baking treatment is necessary.
2. Stainless steel parts shall be passivated by immersion in a dilute nitric acid solution after manufacture.
3. Zinc plating shall be followed by a clear chromate conversion treatment on parts that will be visible after installation in a vehicle.

4.3 Corrosion Resistance

Parts and assemblies supplied to this specification must meet corrosion requirements as described in FMVSS 209. Unless otherwise agreed upon between the supplier and the purchaser, corrosion testing prescribed by ASTM B456 for nickel chromium plating shall be performed using the CASS method as described in ASTM B368.

5.0 QUALITY

All production supplied shall be clean and free from dirt, oils, sharp edges, or defects harmful to product performance.

6.0 QUALIFICATION

Engineering qualification of sources is required in advance of production shipments. Samples shall be accompanied by test data certifying that all requirements of the specification have been met.

6.1 Quality Control Plan

A Quality Control Plan for products supplied to the requirements of this specification will be established by mutual agreement between NAVISTAR and the supplier. Unless specific exception is noted, the following characteristics, where applicable*, shall be included in the plan as features for management by statistical process control.**



- * Other characteristics for inclusion in the control plan may be specified on the engineering drawing and/or purchase order.
- ** See NAVISTAR Engineering Design Standard A-16

7.0 SOURCE APPROVAL AND QUALITY CONTROL

7.1 Supplier Requirements

All suppliers to NAVISTAR are required to be registered to ISO 9001 Quality System Requirements. NAVISTAR will also accept TS-16949 registration as long as the supplier can also fulfill all AIAG PPAP (Production Part Approval Process) documentation and approval requirements. Suppliers must maintain their certification with an accredited registrar and must furnish copies of registration certificates to their Corporate Buyer upon request.

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