

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS A-1001
		Former Designation: <i>TMS-1001</i>
TITLE: Mirror Assemblies, Exterior	CURRENT REV No.: 1702	DATE: Feb. 2017
WRITTEN/EDITED BY: W. Cook	APPROVED BY: R. Goluch	SUPERSEDES: Rev. 1308 – Aug. 2013
PRINTED COPIES OF THIS DOCUMENT MUST BE VERIFIED FOR CURRENT REVISION		
<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 covers the requirements for components of exterior truck mirrors.

2.0 SCOPE

This specification includes material and coating requirements for the mirror assembly, requirements for fasteners and washers, as well as requirements for packaging, quality, and Source Approval and Quality Control.

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

Quality System Standard <i>ISO 9001</i> or TS-16949	NAVISTAR MPAPS D-28
FMVSS 111	NAVISTAR MPAPS G-19 Part I
CFR Title 29, Part 1910	NAVISTAR MPAPS G-21
NAVISTAR MPAPS A-6, Part I	NAVISTAR MPAPS G-9009
NAVISTAR MPAPS A-10, Part I	NAVISTAR MPAPS C-10
NAVISTAR MPAPS A-37	NAVISTAR MPAPS B-50

4.0 REQUIREMENTS

4.1 General

The mirror assemblies shall meet the requirements of FMVSS 111, Rearview Mirrors, and all other applicable Federal and State requirements.

4.2 Mirror Assembly

The applicable type of material and protective coating shall be specified on the Engineering drawing. The types are:

<u>Type</u>	<u>Base Metal</u>	<u>Protective Coating</u>
1	Steel	Paint
2	Steel	Chrome Plate
3	Aluminum	Anodize
4	Stainless Steel	—

This document is restricted and may not be sent outside Navistar, Inc. or reproduced without permission from Corporate Technical Standards. Suppliers are required to assume all patent liability. ©2017 by Navistar, Inc.

FEBRUARY 2017

NUMBER: MPAPS A-1001	Title: <i>Mirror Assemblies, Exterior</i>	REVISION: 1702
--------------------------------	---	--------------------------

4.3 Base Metals

4.3.1 Steel: Shall be low carbon steel conforming to Grade 1, 1C or 2 per MPAPS A-6 (for sheet and strip) or Grade EBS, MPAPS A-10 (for tubing).

4.3.2 Aluminum: Per MPAPS C-10 (alloy and temper shall be specified on the part drawing).

4.3.3 Stainless Steel: Shall be 18-8 austenitic stainless steel per MPAPS A-37.

4.4 Protective Coatings

4.4.1 Paint: Shall be Class IA per MPAPS G-9009; NAV color code shall be specified on the part or assembly drawing.

4.4.2 Chrome Plate: Shall be Class SC4, MPAPS G-19 Part I.

4.4.3 Anodize: Shall be Class A, MPAPS G-21.

NOTE: Mechanical or chemical treatments which govern the appearance of the anodized finish shall also be specified on the Engineering drawing.

4.5 Finish

The decorative appearance of the mirror assembly shall be indicated on the assembly drawing. The material and finish specifications shall reflect the base metal requirements necessary to provide the desired finish. The supplier shall submit samples to the Navistar Industrial Design Group and Materials Engineering for approval of the decorative finish as well as for vehicle testing. These samples shall then be used to establish quality control approval for all future shipments. (See General Information for further discussion of finish requirements.)

4.6 Mirror

4.6.1. Coating: Silver and chrome as stated on the applicable drawing.

4.6.2 Corrosion Resistance: Shall withstand 200 hours salt spray testing (ASTM B117) with no dulling, peeling or other deterioration that would affect reflectivity.

4.6.3 Glass: Glass type shall be stated on the applicable drawing.

4.6.4 Quality: Glass and coating shall be free from defects that would affect serviceability.

4.7 Fasteners

Fasteners for the mirror assembly and for cab installation shall be 18-8 austenitic stainless steel per MPAPS A-37, if they are exposed, and passivated per MPAPS A-37 Finish Type 5. Use of other than stainless steel fasteners must be approved by Materials Engineering.

4.8 Washers

Washers for the mirror assembly and for cab installation shall be 18-8 austenitic stainless steel per MPAPS A-37, or a PA 66 type material (Nylon®) for galvanic insulation (contact materials engineering for requirements). Stainless steel washers shall be passivated per MPAPS A-37 finish Type 5.

5.0 QUALITY

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

6.0 SOURCE APPROVAL AND QUALITY CONTROL

6.1 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

This document is restricted and may not be sent outside Navistar, Inc. or reproduced without permission from Corporate Technical Standards. Suppliers are required to assume all patent liability. ©2017 by Navistar, Inc.

FEBRUARY 2017