NAVISTAR, INC.			
Material, Parts, and Process Specifications (MPAPS)		*NUMBER:* **MPAPS S-EM-74.101-GS/PL**	
		Former Designation: **ESP-EM-74.101-GS**	
TITLE: **Wing Nuts–Metric Series (Noun Code 5780)**		*CURRENT REV No.:* **1506**	*DATE:* **June 2015**
WRITTEN/EDITED BY: **Materials Engineering**	*APPROVED BY:* **Materials Engineering**	*SUPERSEDES:* **ESP-EM-74.101-GS - August 2006**	

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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.

Change Notice: **Changed to New MPAPS format; Combined GS, PP.**

1.0 GENERAL: This specification contains the essentials of the following standards:

International Organization for Standardization:	R68, R262, 898/II, and DR965/II
French Standardization Association:	NFE 27-454
German Institute of Standardization:	DIN 315

General information for metric nuts in MPAPS S-EM-1.101-GS/PL also applies, essentially, to this standard.

Inch series wing nuts may be found in MPAPS S-E-74.101-GS/PL.

2.0 POLICY FOR SELECTING PARTS FOR NEW DESIGN: Approved parts are so designated to reduce variety of parts and assure maximum availability, interchangeability and cost savings.

For new design, parts shall be selected from "Approved" part list only.

Nominal Sizes:	M6, M8, M10, and M12
Material:	Steel, Class 5
Finish:	Zinc Trivalent, Class 6A (ZN6A)

3.0 SQUARENESS: The axis of the thread of the nut will be square to the face of the nut within 2 degrees.

4.0 CHAMFER: Wing nuts will be countersunk on the bearing face at an included angle of 90 to 120 degrees slightly to exceed the major diameter of the thread by an amount sufficient to eliminate encroachment of the thread on the bearing surface.

5.0 THREADS: Thread form, diameters and associated pitches are in accordance with ISO recommendations. Threads will be made to the tolerances for the medium class of fit (6H - internal threads) as shown in ISO 965/II, General Purpose Metric Screw Threads.

6.0 MATERIAL: Steel, Class 5, per MPAPS F-31, Part II. Nuts may be produced by cold forging or hot forming.

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7.0 MECHANICAL PROPERTIES: The property class designation system for steel nuts will be a number which is one-hundredth of the approximate proof load stress in megapascals (MPa). The proof load stress corresponds to the minimum tensile strength of the highest class of bolt or screw with which the nut can be used.

Property Class Designation for Nuts

Property Class Designation:	5
Proof Load Stress, MPa:	500

8.0 FINISHES: In accordance with the Navistar Engineering Material Specification and class listed below:

Plain (PLN) – Free from dirt and rust and coated with a light oil film.
Zinc Trivalent (ZN6A) – MPAPS G-20, Class 6A.

9.0 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.

10.0 COLOR CODING: Not recommended, except in cases where adequate insurance is needed to prevent mixing of "metric parts" with look-alike "inch parts". The color blue is standard identifier used in some industries. This must be handled internally at individual plants where needed and is meant to be supplemental to the normal finish and easily deleted when the need for supplemental identification no longer exists. The supplemental blue color should not be used on finishes such as chromium bright which are specified for cosmetic purposes, or phosphate coating which may cause a loss of color identity.

11.0 METHOD OF DESIGNATION: Wing nuts will be designated by size, word description, material class, finish, and part number as follows:

Wing Nut, M10, Class 5, ZN6A, Part Number

12.0 WORKMANSHIP: Nuts must be free from burrs, slivers, seams, and other defects which might affect their serviceability.

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