

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS S-KM-2.101-GS/PL
		Former Designation: ESP-KM-2.101-GS
TITLE: Hose Clamps–Type F-Metric–Inch Series (Noun Code - 1640)	CURRENT REV No.: 1506	DATE: June 2015
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: ESP-KM-2.101-GS - September 2011
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>		
Change Notice: Changed to New MPAPS format; Combined GS, PP.		

1.0 GENERAL: This standard conforms essentially with SAE Standard J 1670.

Clamps will assemble over and close tight upon round mandrels equal to the corresponding open and closed diameters indicated in the respective open and closed diameter columns.

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3.0 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 in volume buying.

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

Sizes: Inch - All numbered sizes

Metric - All sizes shown

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JUNE 2015

NUMBER: MPAPS S-KM-2.101-GS/PL	TITLE: <i>Hose Clamps Type F</i>	REVISION: 1506
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4.0 MATERIAL:

Bands, Liner and Housing: Stainless steel, Types 201 or 301 per MPAPS A-37.

Screws: Carbon steel, Code 0-202C carbon steel per MPAPS A-0, Part II; case hardened to 40 HRC minimum, case depth to be 0.05 – 0.28 mm (0.002 – 0.011 inches).

Stainless steel, Type 410 per MPAPS A-37, hardness 33-44 HRC, *passivate per MPAPS A-37, type 5.

5.0 FINISHES: Carbon steel components of clamps will be furnished zinc trivalent (ZN6A) plated in accordance with MPAPS G-20, Class 6A.

6.0 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.

7.0 THREADS: Modified buttress thread standard with manufacturer.

8.0 BAND DUCTILITY: When subjected to 180 degrees bend around a 4.77 mm (0.188 in) diameter mandrel at the perforated portion of the band and then straightened, the band shall at no time during or after the test exhibit cracks, breaking, or other indication of failure.

9.0 DURABILITY:

9.1 Requirements for Type F Without Inner Liner: Housing, screw threads, and slots in the band will show no evidence of deformation nor will the clamps show any creep or loss of tension when tightened once on a steel mandrel to an applied screw torque or 5.6 N·m (50 lb in) for carbon steel screws, and 6.8 N·m (60 lb in) for stainless steel screws.

9.2 Requirements for Type F With Inner Liner: Housing, screw threads, and slots in the band will show no evidence of deformation when tightened once on a steel mandrel covered with SAE 20 RI hose material to an applied screw torque of 4.5 N·m (40 lbs in) for clamps up to and including 44 mm (1.75 in) open diameter, and 8.5 N·m (75 lbs in) for clamps over 44 mm (1.75 in) open diameter. Recommended installation torques for clamps with inner liner are:

2.8 N·m (25 lb in) with tolerance of ± 0.6 N·m (5 lbs in) for clamps up to and including 44 mm (1.75 in) open diameter.

5.1 N·m (45 lbs in) with tolerance of ± 0.6 N·m (5 lbs in) for clamps over 44 mm (1.75 in) open diameter.

10.0 METHOD OF DESIGNATION: nominal size, type, description, and part number as shown in the following example will designate Hose clamps.

24 Type F Hose Clamp, Part Number

44 Type F W/Liner Hose Clamp, Part Number

11.0 DEFECTS: All clamps and components thereof shall be free from burrs, seams, laps, loose scale, and any other defects that may affect the performance.

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