

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS S-JM-2.101-GS/PL
		Former Designation: ESP-JM-2.101-GS
TITLE: Hardened Dowel Pins - Metric Series (Noun Code - 6200)	CURRENT REV No.: 1506	DATE: June 2015
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: ESP-JM-2.101-GS - September 2000
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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: Changed to New MPAPS format; Combined GS, GI, PP.		

- 1.0 GENERAL:** Implementation of this standard must be in accordance with the policies and procedures outlined in MPAPS S-A-0.101. There may also be supplemental group instructions in regard to use of metric standards that should be taken into account.

This standard contains the essentials of the following standards:

International Organization for Standardization: ISO 2340
British Standards Institute: BSI 1804, Part II
Deutsche Normen: DIN 6325
Standards Association of Australia: B-142

Inch dimensioned hardened dowel pins may be found on page MPAPS S-J-2.101-GS/PL.

- 2.0 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.
- 3.0 DESIGN CONSIDERATION:** Dowel pins in this standard are to be used either to retain parts in a fixed position or to preserve alignment in mating parts.
- 4.0 METRIC-INCH RELATED SIZES:** During the inch to metric design transition period, the following chart of related sizes can be used for reference. This information is not to be considered as a recommendation for substitutions but only as a means of determining approximate dimensional equivalents.

Metric Series mm	Approximate Inch Series
3	1/8
4	5/32
5	3/16
6	1/4
8	5/16
10	3/8, 7/16
12	1/2
16	9/16, 5/8
20	3/4

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5.0 METHOD OF DESIGNATION: Hardened dowel pins will be designated by size, length, word description, material, and part number as shown in the following example:

10 x 20 mm, Dowel Pin, HTS, Part Number

6.0 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.

Sizes: 3, 4, 5, 6, 8, 10, 12, 16, 20, and 25 mm.

Finish: Plain (PLN)

Lengths: See chart below.

Dimensions in millimeters:

Length	Diameters									
	3	4	5	6	8	10	12	16	20	25
5										
6										
8	X	X								
10	X	X	X							
12	X	X	X	X						
14	X	X	X	X	X					
16	X	X	X	X	X					
20	X	X	X	X	X	X				
25	X	X	X	X	X	X	X			
30	X	X	X	X	X	X	X	X		
35		X	X	X	X	X	X	X		
40		X	X	X	X	X	X	X	X	
45		X	X	X	X	X	X	X	X	
50			X	X	X	X	X	X	X	X
55				X	X	X	X	X	X	X
60				X	X	X	X	X	X	X
65					X	X	X	X	X	X
70					X	X	X	X	X	X
75					X	X	X	X	X	X
80					X	X	X	X	X	X
90						X	X	X	X	X
100						X	X	X	X	X
110							X	X	X	X
120							X	X	X	X
130							X	X	X	X
140							X	X	X	X
150							X	X	X	X
160								X	X	X
170								X	X	X
180								X	X	X
190									X	X
200									X	X

7.0 LENGTH TOLERANCE: The tolerances for length are as follows:

Length	Tolerance
Thru 50 mm	+ 0.5 mm 0
Over 50 mm	+ 0.8 mm 0

8.0 ENDS: The end opposite the chamfered end may be either domed or chamfered at the discretion of the manufacturer.

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