

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		<i>NUMBER:</i> MPAPS S-JM-7.101-GS
		<i>Former Designation:</i> ESP-JM-7.101-GS
<i>TITLE:</i>	Clevis Pins - Metric Series (Noun Code - 6200)	<i>CURRENT REV No.:</i> 1506
		<i>DATE:</i> June 2015
<i>WRITTEN/EDITED BY:</i> Materials Engineering	<i>APPROVED BY:</i> Materials Engineering	<i>SUPERSEDES:</i> ESP-JM-7.101-GS - August 2006
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, 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 divisional supplemental instructions in regard to use of metric standards that should be taken into account.

This specification contains the essentials of the following standards:

International Organization for Standardization: ISO 2341

Inch series clevis pins may be found in MPAPS S-J-7.101-GS/PL.

2.0 DESIGN CONSIDERATION: Conditions which impose a vibration component in a direction parallel to the axis of the pin should be avoided. Clevis pins are principally for use with clevises and are generally reusable without affecting holding action.

Clevis pins are retained in place with split (cotter) pins.

3.0 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
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

4.0 PREFERRED LENGTHS: When standards for clevises are developed, preferred lengths for such use will be shown. When used elsewhere, it is recommended that diameter-length combinations be selected from the chart in the preferred parts section of 18.0.

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. ©2015 by Navistar, Inc.

JUNE 2015



Documents

Page 1 of 4
Document Sharing Hub

NUMBER: MPAPS S-JM-7.101-GS/PL	TITLE: Clevis Pins - Metric Series	REVISION: 1506
---	---	---------------------------------

5.0 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.

6.0 METHOD OF DESIGNATION: Clevis pins will be designated on purchase orders by size, length, word description, material, finish, and part number as follows:

6 x 20 mm, Clevis Pin, Hard, ZN6A, Part Number

7.0 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.

Material: Steel, Case Hardened (hard)

Finish: Zinc Trivalent, Class 6A (ZN6A), and
Phosphate Coated (PHC)

Nominal Sizes and

Length Incrementation:

Dimensions in millimeters:

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

Note: Lengths over 200 mm will be in 20 mm increments.

8.0 TOLERANCES: Unless otherwise specified, tolerances on all dimensions are ± 0.25 mm.

9.0 HEADS: The top of head will be flat and either chamfered or rounded at outer periphery.

10.0 BEARING SURFACE: The bearing surface of the head will be flat and square with the axis of pin (determined over a distance from under the head equivalent to 1.5 times the basic pin diameter) within 2 degrees.

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. ©2015 by Navistar, Inc.

JUNE 2015