

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS S-JM-1.101-GS/PL
		Former Designation: ESP-JM-1.101-GS
TITLE: Split (Cotter) Pins - Extended Prong - Metric Series (Noun Code - 6200)	CURRENT REV No.: 1506	DATE: June 2015
WRITTEN/EDITED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES: ESP-JM-1.101-GS - August 2012
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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, NPP.		

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.

In formulating this standard for metric split pins, considerable investigation was devoted to an effort to establish interchangeability with the inch series pins in order to avoid the creation of separate part numbers, records, inventories, etc. However, significant dimensional differences in most sizes, primarily in head dimensions and recommended hole sizes, preclude this possibility.

This specification contains the essentials of the following standards:

International Organization for Standardization: ISO R 1234
 Association Francaise de Normalisation: NF E27-487
 British Standards Institute: BS 1574
 Deutsche Normen: DIN 94
 Standards Association of Australia: AS 1236

The inclusion of dimensional data is not intended to imply that all the pins described are stock production sizes.

Inch series split (cotter) pins may be found in MPAPS S-J-1.101-GS/PL.

2.0 DESIGN CONSIDERATION: Split pins are normally used to position and lock parts in alignment. They are also used as locking devices for other features such as clevis pins, shafts, threaded rods, etc.

The optimum usage of split pins is to lock slotted nuts. In these applications, the pin should be of sufficient length to provide a minimum of 6 mm protrusion of the longer leg beyond the nut flat. This allows adequate grip for bending the pin legs at installation.

3.0 METRIC-INCH RELATED SIZES: During the inch to metric design conversion period, the following chart of related sizes may be of value for handy reference. This information is not to be considered as recommended size substitutions but only as a means of quickly determining approximate dimensional equivalents.

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Nominal Size Designation	
Metric Series (mm)	Inch Series
1	1/32
1.6	1/16
2	5/64
2.5	3/32
3.2	1/8
4	5/32
5	3/16
6.3	1/4
8 *	5/16
10 *	3/8
13 *	1/2
16 *	5/8
20 *	3/4

* Non-preferred for new design. Use other locking design concepts.

4.0 NON-PREFERRED LENGTHS: In the event it is absolutely necessary to use lengths other than those listed as preferred on page JM-1.101, the following should be adhered to:

4, 5, 14, 18, 22, 28, 36, 45, 56, 71, 90, 112, 140, 160, 180, 200, 224, 250, 280

5.0 METHOD OF DESIGNATION: Split pins will be designated on purchase orders by size, length, word designation, material, finish, and part number as follows:

4 x 40 mm, Split Pin, STL, PLN, 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.

Nominal Sizes: 1, 1.6, 2, 2.5, 3.2, 4, 5, and 6.3

Material: Steel (STL)

Finish: Plain (PLN)

Lengths: See chart below

Dimensions in millimeters:

Nominal Length	Nominal Size							
	1	1.6	2	2.5	3.2	4	5	6.3
6	X							
8	X	X						
10	X	X	X					
12	X	X	X	X				
16	X	X	X	X	X			
20	X	X	X	X	X	X		
25		X	X	X	X	X	X	
32		X	X	X	X	X	X	X
40			X	X	X	X	X	X
50				X	X	X	X	X
63					X	X	X	X
80						X	X	X
100							X	X
125								X

For non-preferred lengths, see section 4.0

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