NAVISTAR, INC.			
Material, Parts, and Process Specifications (MPAPS)		*NUMBER:* **MPAPS S-K-1.115-GS/PL**	
		Former Designation: **ESP-K-1.115-GS**	
TITLE: **Heavy Duty T-Bolt Clamps - English Series (Noun Code - 1640)**		*CURRENT REV No.:* **1506**	*DATE:* **June 2015**
WRITTEN/EDITED BY: **Materials Engineering**	*APPROVED BY:* **Materials Engineering**	*SUPERSEDES:* **ESP-K-1.115-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: Bridge construction and Trunnion Design for styles 1 and 2 to be standard with manufacturer. Bolt for styles 1, 2, and 3 have either 1/4-28 or 1/4-20 UNC 2A thread, standard with manufacturer. Styles 1 and 2 bolts may be curved for clearance under 4 inch diameter. The Hexagon Locknut for styles 1 and 2 will be standard with the manufacturer and will be able to withstand 250 degrees F. Styles 1 and 3 available 2.18 inches maximum diameter and larger. The maximum diameter values for styles 1 and 3 are measured from first thread engagement of locking nut to screw. Style 2 is measured from full nut thread engagement. Style 3 clamps have an adjustment range of .25 inch diameter in sizes 2.13 inch through 2.69 maximum diameters.

Refer Section 9.0 for design styles.

2.0 TONGUE: For sizes up to2 inch nominal diameter .025 for sizes over 2 inch nominal diameter .040.

3.0 MATERIAL: Bolts – All Styles = 1018 to 1025 Heat treated 120,000 psi.
Band and Bridge – Stainless steel, Types 201 or 301 per MPAPS A-37.

4.0 FINISHES: Bolts, Nuts, and Lugs will be Zinc Trivalent with Sealer (ZN8F), MPAPS G-20, Class 8F.

5.0 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.

6.0 PERFORMANCE: Clamps will open and close tight upon round mandrels of the size indicated in the respective max. and min. diameter columns. It is recommended that type T clamps not be tightened beyond maximum torque of 85 inch pounds.

7.0 POLICY FOR SELECTING PARTS FOR NEW DESIGN:

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

Incrementation Policy:

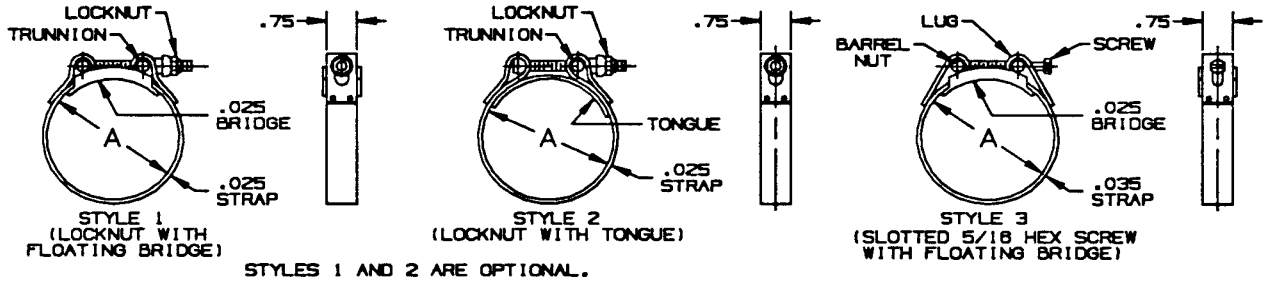
Clamp Sizes to 3 inches = 1/8 inch increments
Over 3 inches = 1/4 inch increments

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8.0 DEFECTS: Clamps will be free from burrs, seams, laps or other defects which might affect their Serviceability.



9.0 DIMENSIONS:

Clamp Size	A		Clamp Size	A		Clamp Size	A		Clamp Size	A		Clamp Size	A	
Nom	Min	Max	Nom	Min	Max	Nom	Min	Max	Nom	Min	Max	Nom	Min	Max
1.50	1.40	1.56	2.38#	2.19	2.44	*3.38	3.13	3.44	5.00	4.75	5.06	*6.62	6.37	6.68
1.62	1.50	1.68	*2.44#	2.25	2.50	3.50	3.25	3.56	*5.12	4.87	5.18	6.75	6.50	6.81
1.75	1.56	1.81	2.50	2.25	2.56	*3.62	3.37	3.68	5.25	5.00	5.31	*6.88	6.63	6.94
1.88	1.63	1.94	2.50#	2.31	2.56	3.75	3.50	3.81	*5.38	5.13	5.44	7.00	6.75	7.06
2.00	1.81	2.06	*2.56#	2.38	2.63	*3.88	3.63	3.94	5.50	5.25	5.56	*7.12	6.87	7.18
*2.06#	1.88	2.13	2.62	2.37	2.68	4.00	3.75	4.06	*5.62	5.37	5.68	7.25	7.00	7.31
2.12	1.87	2.18	2.62#	2.44	2.69	*4.12	3.87	4.18	5.75	5.50	5.81	*7.38	7.13	7.44
*2.13#	1.94	2.19	*2.69	2.44	2.75	4.25	4.00	4.31	*5.88	5.63	5.94	7.50	7.25	7.56
*2.19#	2.00	2.25	2.75	2.50	2.81	*4.38	4.13	4.44	6.00	5.75	6.06	*7.62	7.37	7.68
2.25	2.00	2.31	2.88	2.63	2.94	4.50	4.25	4.56	*6.12	5.87	6.18	7.75	7.50	7.81
2.25#	2.06	2.31	3.0	2.75	3.06	*4.62	4.37	4.68	6.25	6.00	6.31	*7.88	7.63	7.94
*2.31#	2.13	2.38	*3.12	2.87	3.18	4.75	4.50	4.81	*6.38	6.13	6.44			
2.38	2.13	2.44	3.25	3.00	3.31	*4.88	4.63	4.94	6.50	6.25	6.56	8.00	7.75	8.06

* Non-Preferred # Style 3 only

10.0 PART LIST:

10.1 Approved:

Nominal Size	Clamp Min	Size Max	Clamp Style	Part Number
6.50	6.25	6.56	3	177175H1

11.0 TECHNICAL INFORMATION:

For further information related to the technical content of this specification, contact:	Suppliers may purchase controlled copies of this specification by contacting:
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