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SURFACE VEHICLE RECOMMENDED PRACTICE

Submitted for recognition as an American National Standard

SAE

J1835

**REV.
MAR90**

Issued 1990-03-19

FASTENER HARDWARE FOR WHEELS FOR DEMOUNTABLE RIMS

1. SCOPE:

This SAE Recommended Practice establishes the mounting hardware to be used with demountable rims, wheels for demountable rims, rim spacers designed for 28° bevel mounting systems, and intended for use on commercial vehicles. The dimensions given are those necessary to maintain serviceability and interchangeability of mounting hardware.

This document is divided into two sections. Section 1 establishes the practice for mounting hardware. Section 2 records information on current mounting hardware. Special and less common applications are not covered in this document.

2. REFERENCES:

SAE J393, Nomenclature - Wheels, Hubs and Rims for Commercial Vehicles

SAE J851, Dimensions - Wheels for Demountable Rims, Demountable Rims, and Rim Spacers - Commercial Vehicles

3. DEFINITIONS:

A detailed listing of basic nomenclature is contained in SAE J393. Figures 1 through 8 and Tables 1 through 3, introduce, illustrate, and specify additional nomenclature and definitions. All dimensions are in inches unless otherwise specified. Single clamps are rim clamps with one hole and double clamps are rim clamps with two holes.

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4. SECTION 1: MOUNTING HARDWARE DIMENSIONS (RECOMMENDED PRACTICE):

4.1 Rim Clamp Nut:

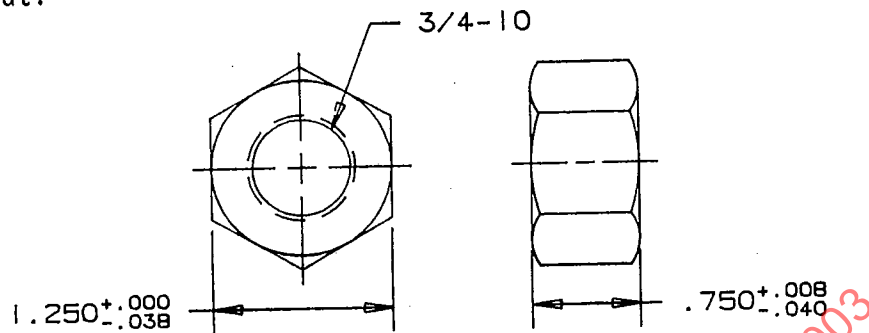


FIGURE 1 - Rim Clamp Nut

4.2 Rim Clamp Stud Standout:

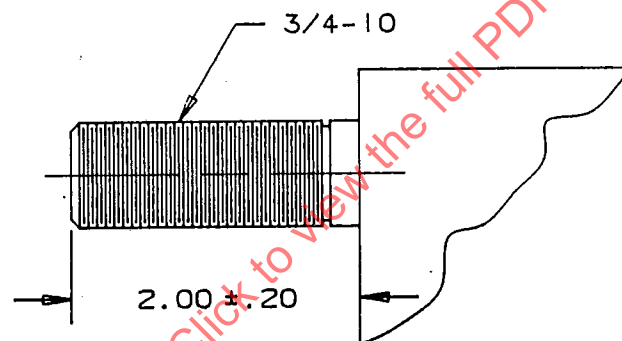


FIGURE 2 - Rim Clamp Stud Standout

4.3 Rim Clamp Dimensions:

4.3.1 Dual Mounting:

4.3.1.1 Dual Assembly:

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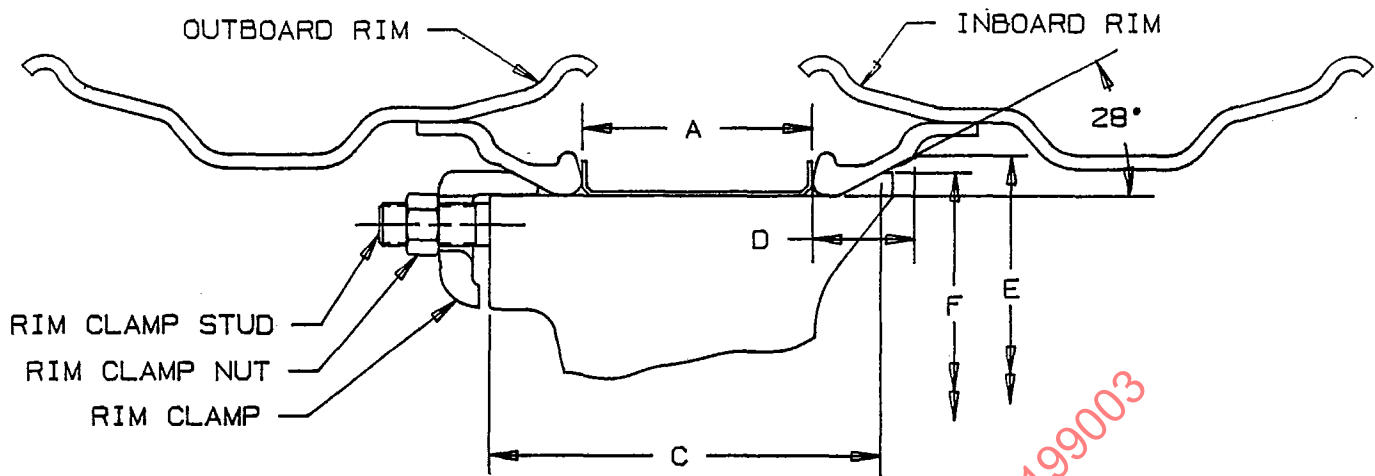


FIGURE 3 - Dual Assembly, Drop Center Rims Shown

4.3.1.2 Single Clamps:

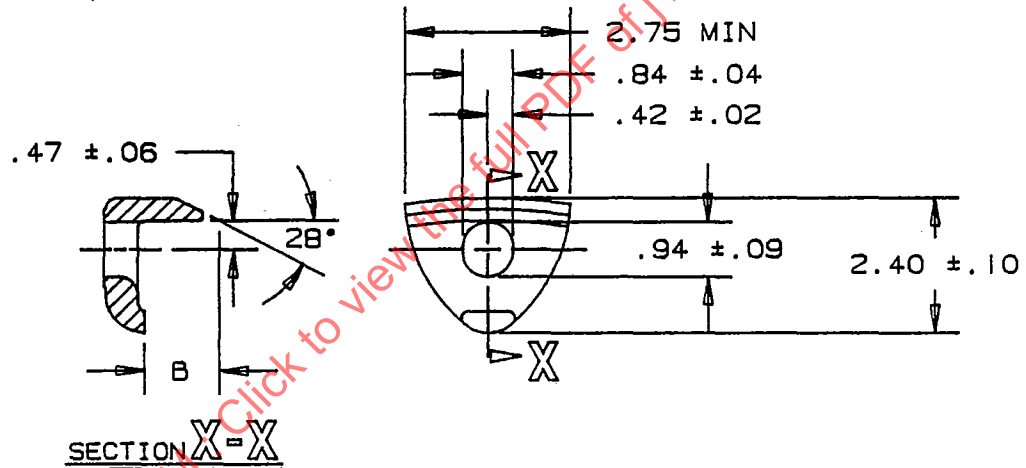


FIGURE 4 - Single Clamps

TABLE 1 - Dimensions for Single Clamps (Dual Mounting),
Refer to Figure 3

(A) SPACER WIDTH	(B) RIM CLAMP TOE LENGTH	(C) SPOKE LENGTH	(D) RIM BEVEL INTERSECTION (28° LAYOUT LINE) ±.040	(E) 28° BEVEL LAYOUT DIAMETER (NOMINAL WHEEL DIAMETER)	(F) OUTSIDE DIAMETER (REFERENCE)
+ .060 - .047	± .05	± .06			
3.380	1.84	6.56	1.762	15, 20, 22, 24	E -.635
3.620	1.59				
4.000	1.21				
3.620	1.84				
4.000	1.46	6.81	1.762	20, 22, 24	E -.719
4.250	1.21				
3.620	1.59				
4.000	1.21		2.000	20, 24	

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4.3.1.3 Double Clamps:

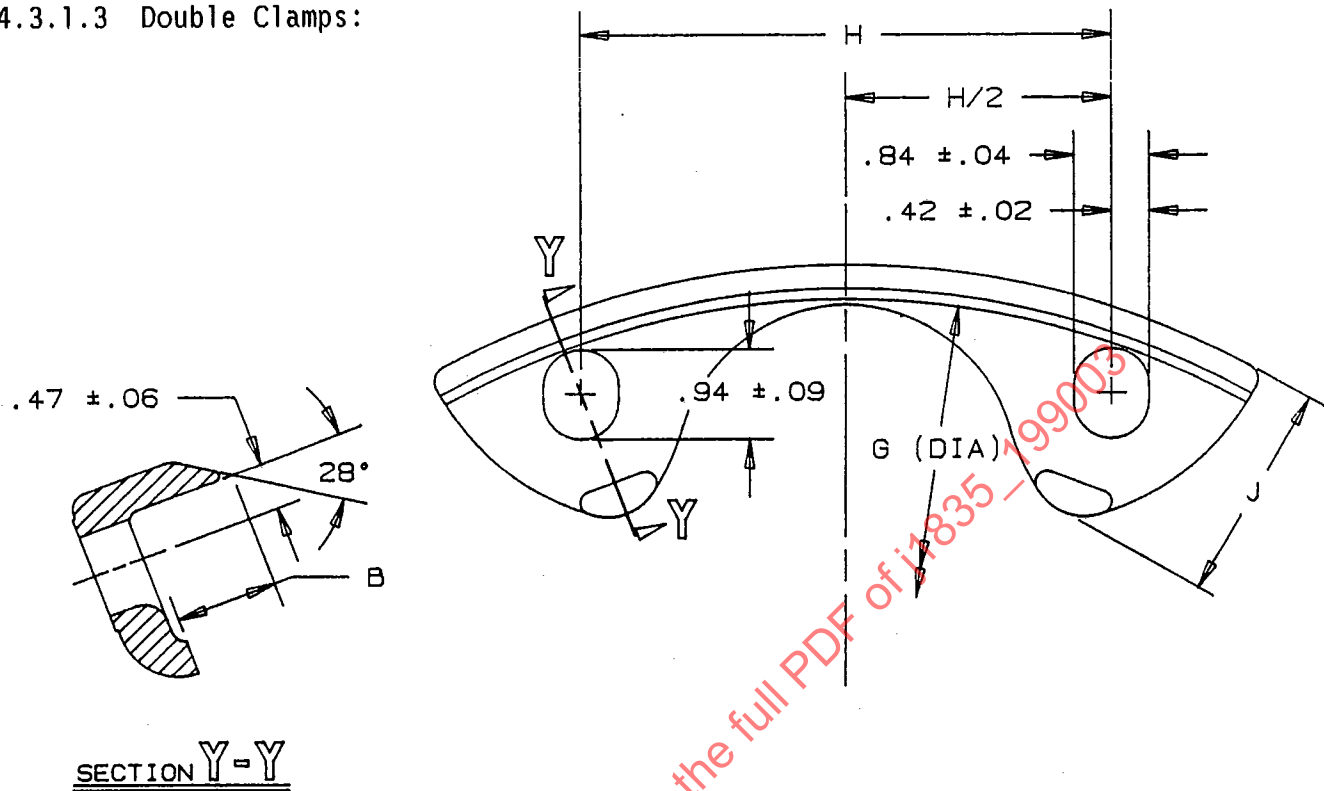


FIGURE 5 - Double Clamps

TABLE 2 - Dimensions for Double Clamps (Dual Mounting),
Refer to Figure 3

(A) SPACER WIDTH	(B) RIM CLAMP TOE LENGTH	(C) SPOKE LENGTH	(D) RIM BEVEL INTERSECTION (28° LAYOUT LINE)	(E) 28° BEVEL LAYOUT DIAMETER (NOMINAL WHEEL DIAMETER)	(G) RIM CLAMP DIAMETER	(H) HOLE SPREAD	(J) RIM CLAMP HEIGHT	(F) OUTSIDE DIAMETER (REFERENCE)
+ .060 - .047	± .05	± .06	± .040		± .03	± .01	± .03	
4.000	1.21	6.56	1.762	15	13.54	4.50	1.82	E --.635
				20	18.54	6.81	2.42	
				22	20.54	8.91		
3.380	1.84	6.56	1.762	15	13.54	4.50	1.82	
				20	18.54	6.81	2.42	
				22	20.54	8.91		

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4.3.2 Single Mounting:

4.3.2.1 Single Assembly:

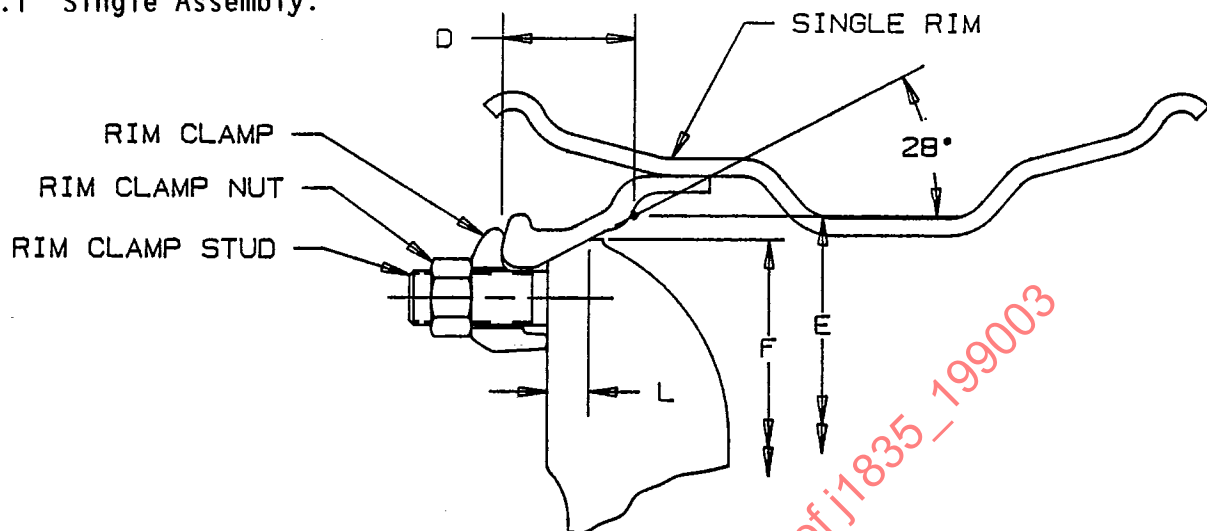


FIGURE 6 - Single Assembly, Drop Center Rim Shown

4.3.2.2 Single Clamps:

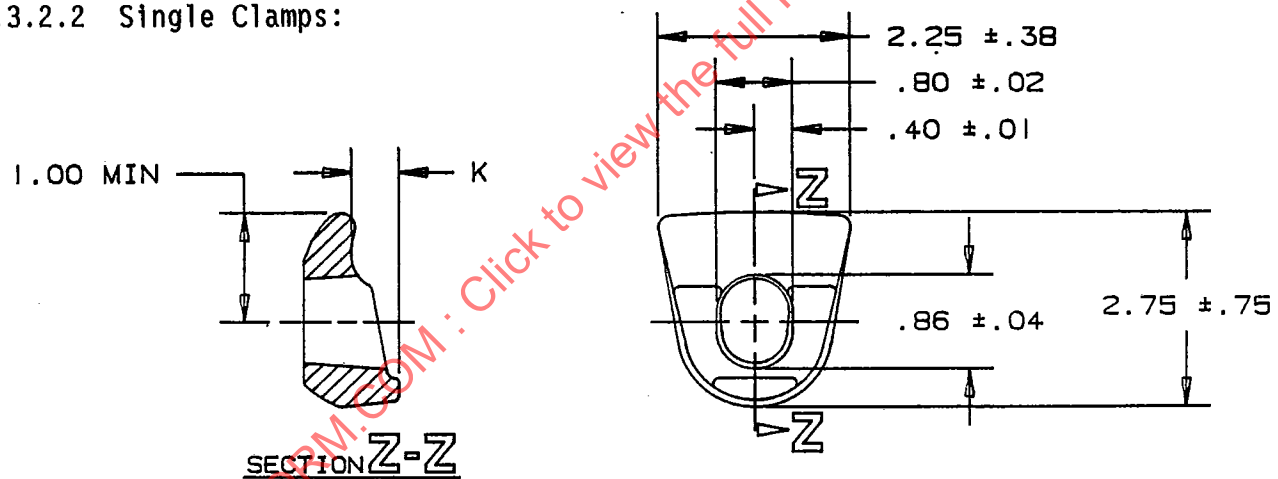


FIGURE 7 - Single Clamps

TABLE 3 - Dimensions for Single Clamps (Single Mounting),
Refer to Figure 6

(E) 28° BEVEL LAYOUT DIAMETER (NOMINAL WHEEL DIAMETER)	(D) RIM BEVEL INTERSECTION (28° LAYOUT LINE) ±.040	(K) RIM CLAMP OFFSET ±.03	(L) BEVEL LENGTH ±.06	(F) OUTSIDE DIAMETER (REFERENCE)
20	1.762	.46	.60	E -.635
22				
24				
20	2.000	.63	.60	E -.719
24				

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5. SECTION 2 - MOUNTING HARDWARE DIMENSIONS (CURRENT PRACTICE):

5.1 Single Clamps:

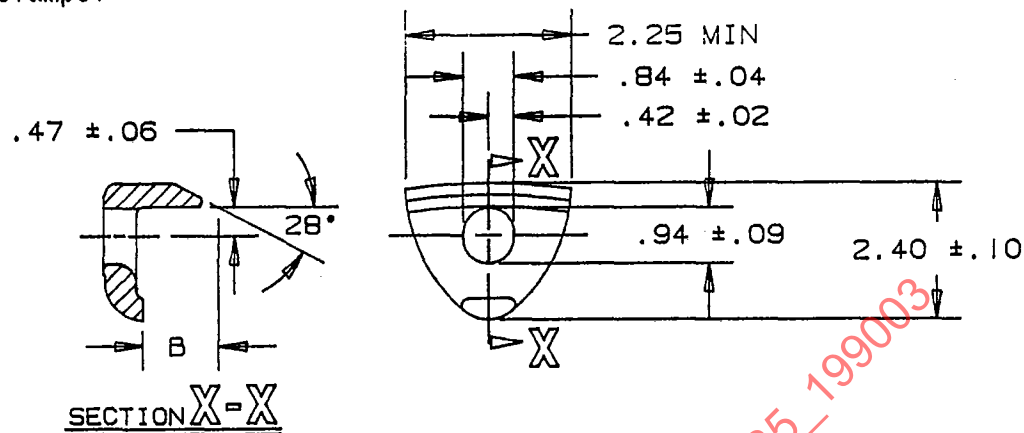


FIGURE 8 - SINGLE CLAMPS

TABLE 4 - Dimension for Single Clamps (Dual Mounting),
Refer to Figure 8

(A)	(B)	(C)	(E)	(D)	(F)
SPACER WIDTH + .060 -0.47	RIM CLAMP TOE LENGTH ±.13	SPOKE LENGTH ±.06	28° BEVEL LAYOUT DIAMETER (NOMINAL WHEEL DIAMETER)	RIM BEVEL INTERSECTION (28° LAYOUT LINE) ±.040	OUTSIDE DIAMETER (REFERENCE)
3.380	1.86	6.56	15, 20, 22, 24	1.762	E -.635
3.620	1.56				
4.000	1.25		20, 22, 24		
3.620	1.82				
4.000	1.48	6.81	20, 22, 24	2.000	E -.719
3.620	1.59	6.81	20, 24		
4.000	1.21				
3.380	2.30				
3.620	2.05	6.94	20, 22, 24	1.762	E -.635
4.000	1.67				
4.250	1.42				
3.620	2.03				
4.000	1.72	7.03	20, 22, 24	1.762	E -.635
4.250	1.47				
4.500	1.22				
3.380	2.36				
3.620	2.06	7.06	20, 22, 24	1.762	E -.635
4.000	1.75				
4.250	1.50				
4.500	1.25				

J1835 MAR90RATIONALE:

The main objective of the SAE Recommended Practice is to document fastener hardware dimensions for wheels for demountable rims. This will help:

- a. Maintain serviceability of mounting hardware
- b. Insure correct interchangeability of mounting hardware
- c. Reduce the number of mounting hardware combinations in the future

Section 1, which establishes the document for mounting hardware, was written to serve as a guide for future fastener hardware design.

Section 2, which records information on current mounting hardware, was written to document existing dimensions on fastener hardware for future reference.

Other fastener hardware applications were not included in this document because they were used on either special or less common applications. Metric dimensions were not included in this document because the design of this hardware and its mating parts were done using the English (inch) system.

RELATIONSHIP OF SAE STANDARD TO ISO STANDARD:

Not applicable.

REFERENCE SECTION:

SAE J393, Nomenclature - Wheels, Hubs and Rims for Commerical Vehicles

SAE J851, Dimensions - Wheels for Demountable Rims, Demountable Rims, and Rim Spacers - Commercial Vehicles

APPLICATION:

This SAE Recommended Practice establishes the mounting hardware to be used with demountable rims, wheels for demountable rims, rim spacers designed for 28° bevel mounting systems, and intended for use in commercial vehicles. The dimensions given are those necessary to maintain serviceability and interchangeability of mounting hardware.

This document is divided into two sections. Section 1 establishes the practice for mounting hardware. Section 2 records information on current mounting hardware. Special and less common applications are not covered in this document.

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