



### 2.1.1 SAE Publication

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J694 Disc Wheel/Hub or Drum Interface Dimensions—Commercial Vehicles

### 2.2 Related Publication

The following publication is provided for information purposes and is not a required part of this document.

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

## 3. DEFINITIONS

A listing of basic nomenclature and definitions are shown below. Metric mounting systems shown in Figures 1 and 2 are given in millimeters (mm). Inch mounting systems shown in Figures 3 and 4 are given in inches.

### 3.1 Feature Definition

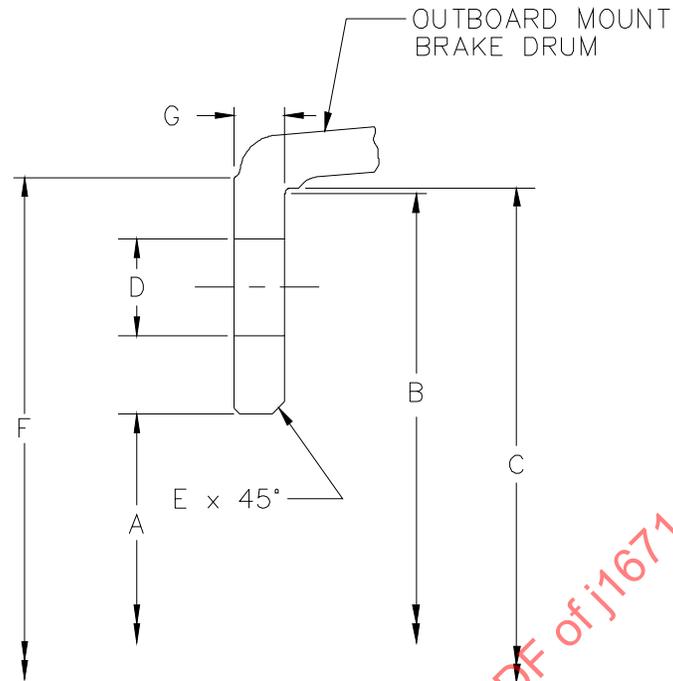
- A Drum Center Hole Diameter
- B Inside Drum Face Diameter (Flat)
- C Inside Clearance Diameter
- D Wheel Bolt or Stud Hole Diameter
- E Drum Center Hole Chamfer
- F Wheel Backup Diameter (for reference only)
- G Drum Thickness
- H Drum Pilot Diameter of Hub
- J Hub Flange Face Diameter (Flat)
- K Hub Flange Outside Diameter
- L Drum Pilot Length on Hub
- M Drum Seat Length on Hub
- N Hub/Drum Pilot Fillet Radius on Hub

## 4. MOUNTING SYSTEM

The combination of hub/drum interface characteristics that identify uniqueness. These characteristics are: number of bolt holes, bolt circle diameter, and pilot diameter. Unique mounting systems are defined by the Roman numerals in applicable tables throughout the document. Within a given mounting system, the brake drums are interchangeable only by use of the appropriate hubs with appropriate dimensions.

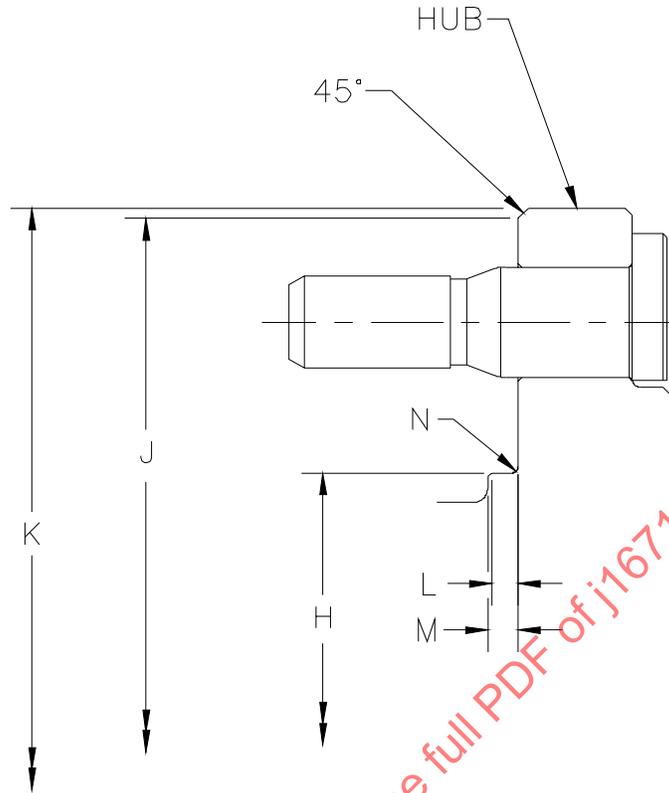
## 5. SCALLOPED HUBS

In an attempt to reduce wheel end package weight, some hub manufacturers have adopted the practice of creating scallops in the mounting flange of the hub. The term “scallop” refers to the removal of material from the drum backup diameter that results in an interrupted support face. In some applications, the use of scalloped hubs has led to the development of cyclical fatigue cracks in disc wheels. It is recommended that scalloped hubs not be used when the disc wheel is mounted directly to the mounting face of the hub. Use of scalloped hubs with outboard mounted brake drums is generally deemed acceptable. Wheel manufacturers should be consulted for each particular application.



MOUNTING SYSTEMS			BRAKE DRUM DIMENSIONS						
			A	B	C	D	E	F	G
Mounting System (SAE J694)	No. of Studs or Bolts	Bolt Circle Diameter	Drum Center Hole Diameter	Minimum Inside Drum Face Diameter	Minimum Inside Clearance Diameter	Minimum Drum Bolt or Stud Hole Diameter	Minimum Drum Center Hole Chamfer	SAE J694 Wheel Backup (Ref)	Minimum Drum Thickness
II	8	275	228.62 228.52	319.8	324.4	21.5	2.3	320.0 315.0	6.1
III	10	285.75	223.08 222.98	330.5	336.0	23.5	2.3	340.0 335.0	6.1
IV	10	335	285.85 285.75	369.3	375.9	23.5	2.3	385.0 380.0	6.1
XIV	8	275	228.62 228.52	330.5	336.0	23.5	2.3	343.0 334.0	6.1

FIGURE 1 - DRUM INTERFACE DIMENSIONS  
ALL DIMENSIONS IN MILLIMETERS



MOUNTING SYSTEMS			HUB DIMENSIONS					
Mounting System (SAE J694)	No. of Studs or Bolts	Bolt Circle Diameter	H	J	K	L	M	N
			Drum Pilot Diameter	Maximum Flange Face Diameter	Maximum Hub Flange Diameter	Minimum Drum Pilot Length	Maximum Drum Seat Length	Maximum Drum Pilot Fillet Radius
II	8	275	228.49 228.39	319.0	324.0	4.1	6.1	2.3
III	10	285.75	222.96 222.86	330.0	334.0	4.1	6.1	2.3
IV	10	335	285.73 285.63	368.0	370.0	4.1	6.1	2.3
XIV	8	275	228.49 228.39	330.0	334.0	4.1	6.1	2.3

FIGURE 2 - HUB INTERFACE DIMENSIONS  
ALL DIMENSIONS IN MILLIMETERS