

**Dimensions—Wheels for Demountable Rims, Demountable Rims,
and Spacer Bands—Commercial Vehicles**

1. **Scope**—This SAE Recommended Practice establishes dimensions for wheels for demountable rims, demountable rims, and rim spacers. The dimensions given are those necessary to maintain serviceability and interchangeability of the demountable rims, rim spacers, and wheels for demountable rims. Special and less common applications are not covered in this recommended practice.
2. **References**
 - 2.1 **Applicable Publication**—The following publication forms a part of this specification to the extent specified herein. Unless otherwise specified, the latest issue of SAE publications shall apply.
 - 2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J393—Nomenclature—Wheels, Hubs, and Rims for Commercial Vehicles
 - 2.2 **Related Publications**—The following publications are provided for information purposes only and are not a required part of this document.
 - 2.2.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1835—Fastener Hardware for Wheels for Demountable Rims
 - 2.2.2 ISO PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO 3911—Wheels/rims for pneumatic tyres—Nomenclature, designation and marking
3. **Definitions**—A detailed listing of basic nomenclature is contained in SAE J393. Figures 1A to 6 introduce, illustrate, and specify additional nomenclature and definitions. All dimensions are in inches unless otherwise specified.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

TO PLACE A DOCUMENT ORDER: (724) 776-4970 FAX: (724) 776-0790
SAE WEB ADDRESS <http://www.sae.org>

4. Dimensions for a Wheel for Demountable Rim

4.1 Front Wheel for Demountable Rim—(See Figures 1A and 1B.)

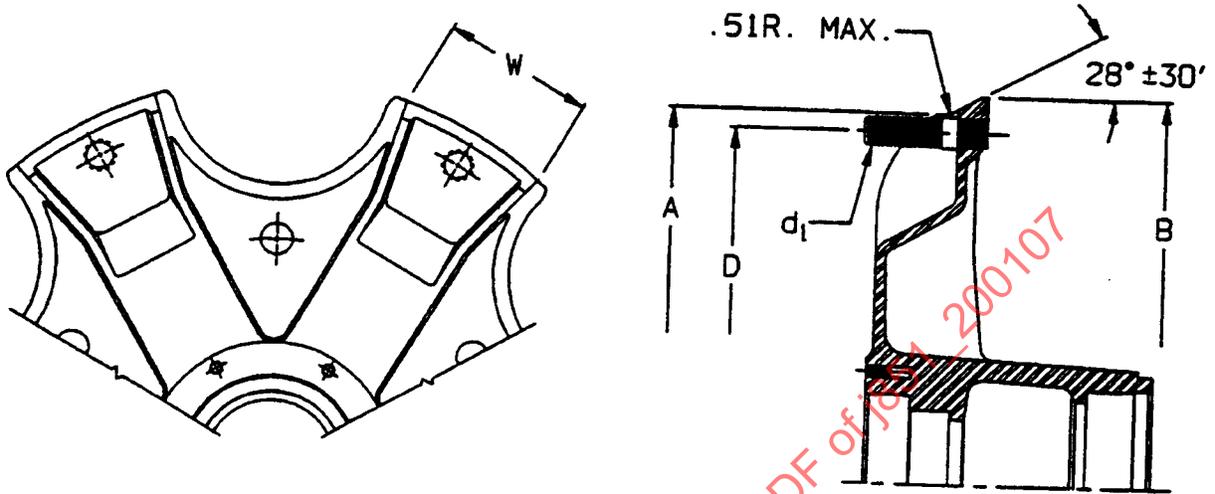


FIGURE 1A—FRONT WHEEL

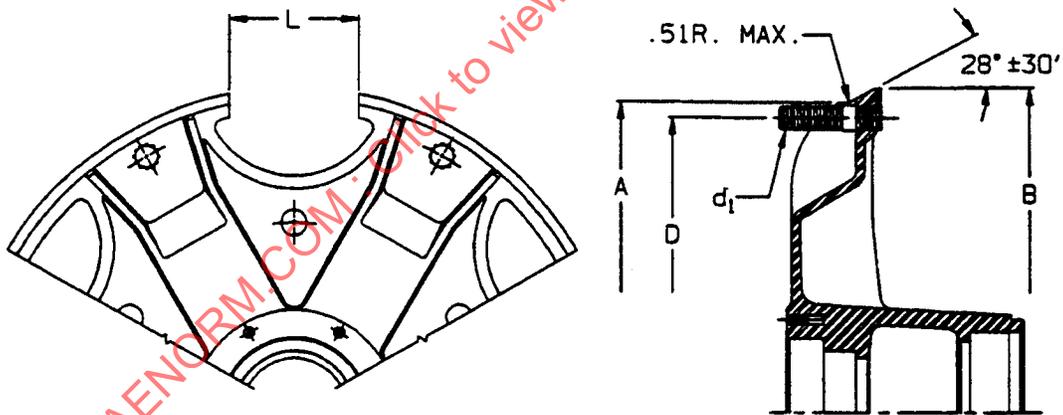


FIGURE 1B—FRONT WHEEL WITH SPECIAL RIM LOCATOR SLOT

4.2 Rear Wheel for Demountable Rims—(See Figures 2A and 2B.)

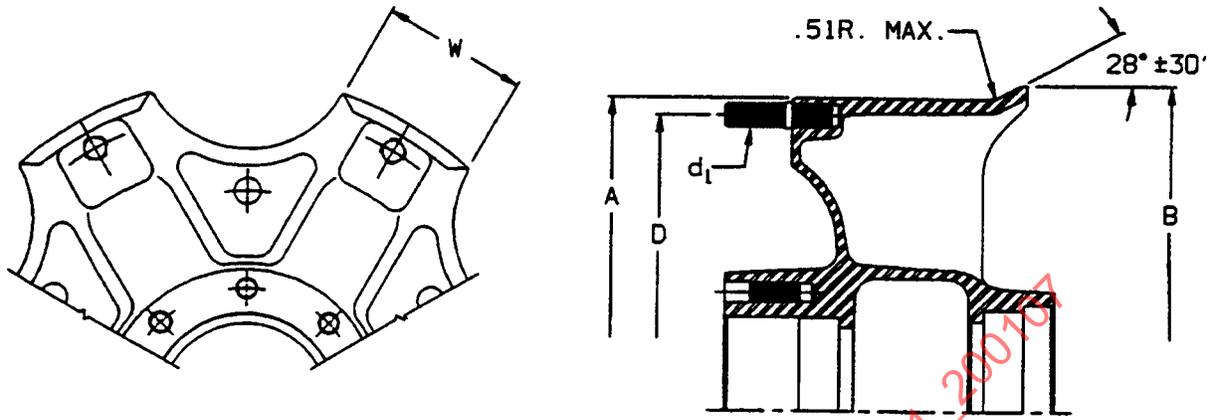


FIGURE 2A—REAR WHEEL

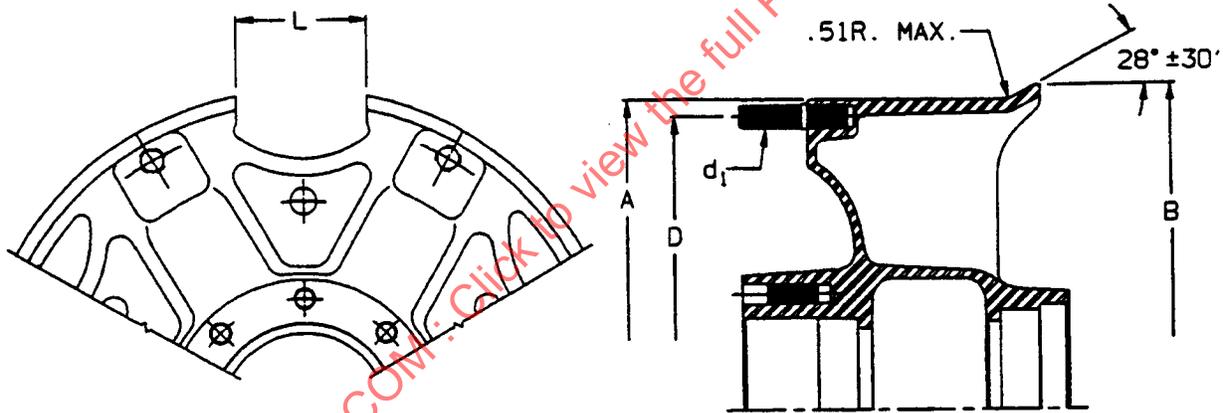


FIGURE 2B—REAR WHEEL WITH SPECIAL RIM LOCATOR SLOT

4.3 Definition of Wheel Dimensions (see 4.4 for values)

- A = Rim mounting diameter (when used)
- B = Wheel outside diameter
- D = Rim clamp stud/bolt circle diameter
- d_1 = Rim clamp stud or bolt (size and thread)
- W = Bevel width (rim contact bearing width)
- L = Rim locator width (minimum of one slot)

4.4 Wheel Dimensions and Tolerances—(See Table 1.)

TABLE 1—WHEEL DIMENSIONS AND TOLERANCES

Rim Size	A +0/-0.015	B +0/-0.030	D (Ref) Front	D (Ref) Rear	W (Min)	L (Min)	d ₁
15 × 8.0 Max	13.550	14.365	12.500	12.500	2.00	3.90	3/4-10
20 × 8.0 Max	18.550	19.365	17.500	17.500	2.50	3.90	3/4-10
22 × 8.0 Max	20.550	21.365	19.500	19.500	2.75	4.60	3/4-10
24 × 8.0 Max	22.550	23.365	21.500	21.500	2.75	5.40	3/4-10
All 17.5	13.550	14.365	12.500	12.500	2.00	3.90	3/4-10
All 22.5	18.550	19.365	17.500	17.500	2.50	3.90	3/4-10
All 24.5	20.550	21.365	19.500	19.500	2.75	4.60	3/4-10
20 × 8.5 to 10.0	18.422 ⁽¹⁾	19.281	17.500 ⁽²⁾	17.375	2.75	3.90	3/4-10
22 × 8.5 to 10.0	20.422 ⁽¹⁾	21.281	19.500	19.375	2.75	4.60	3/4-10
24 × 8.5 to 10.0	22.422 ⁽¹⁾	23.281	21.500 ⁽³⁾	21.375	2.75	5.40	3/4-10

1. Tolerance +0/-0.023.
2. With double bevel rims a bolt circle diameter of 16.625 can be used.
3. With double bevel rims a bolt circle diameter of 20.625 can be used.

5. Rim Dimensions

5.1 Demountable Rims—(See Figures 3 to 5.)

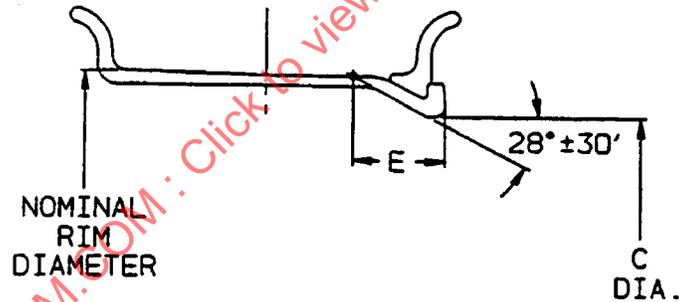


FIGURE 3—MULTI-PIECE FLAT BASE RIM

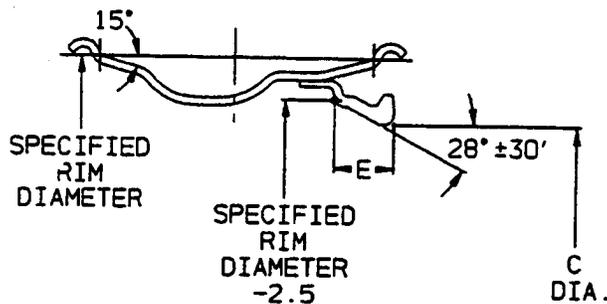


FIGURE 4—FULL DROP CENTER RIM

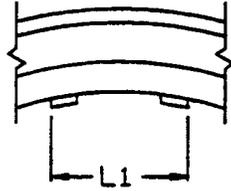


FIGURE 5—VALVE LOCATOR WIDTH

5.2 Definition of Dimensions

- C = Cylindrical gauge diameter
- E = Rim bevel intersection/28 degree layout line (rim bevel location)
- L1 = Valve locator width

5.3 Demountable Rim Dimensions and Tolerances—(See Table 2.)

TABLE 2—DEMOUNTABLE RIM DIMENSIONS AND TOLERANCES

Rim Size	C		L1 Maximum
	Minimum	E ± 0.040	
15 × 8.0 Max	13.550	1.762	3.810
20 × 8.0 Max	18.550	1.762	3.810
22 × 8.0 Max	20.550	1.762	4.560
24 × 8.0 Max	22.550	1.762	5.310
All 17.5	13.550	1.762	3.810
All 22.5	18.550	1.762	3.810
All 24.5	20.550	1.762	4.560
20 × 8.5 to 10.0	18.422	2.000	3.820
22 × 8.5 to 10.0	20.422	2.000	4.560
24 × 8.5 to 10.0	22.442	2.000	5.310

6. Spacer Band Dimensions—(See Figure 6.)

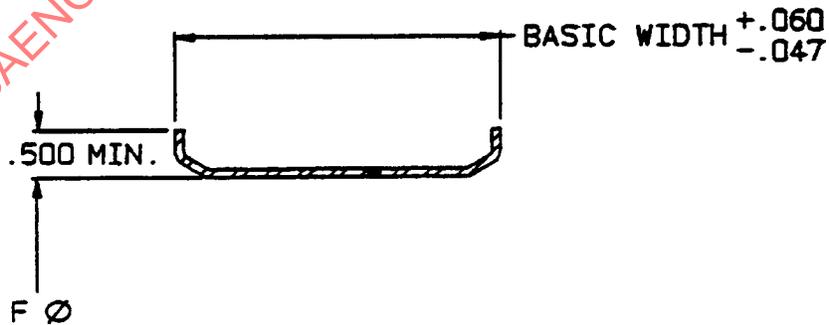


FIGURE 6—SPACER BAND