

A Product of the
Cooperative Engineering Program

SAE J851 JUN87

**Dimensions —
Wheels for
Demountable Rims,
Demountable Rims,
and Rim Spacers —
Commercial Vehicles**

SAE Recommended Practice
Revised June 1987

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Ø DIMENSIONS - WHEELS FOR DEMOUNTABLE RIMS, DEMOUNTABLE RIMS, AND
RIM SPACERS - 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 rim, rim spacer, and wheel for demountable rim. Special and less common applications are not covered in this recommended practice.
2. **DEFINITIONS:** A detailed listing of basic nomenclature is contained in SAE J393. Figs. 1, 2, 3, 4, 5, and 6 introduce, illustrate and specify additional nomenclature and definitions. All dimensions are in inches unless otherwise specified.
3. **DIMENSIONS FOR A WHEEL FOR DEMOUNTABLE RIM:**
 - 3.1 **Front Wheel For Demountable Rim:**

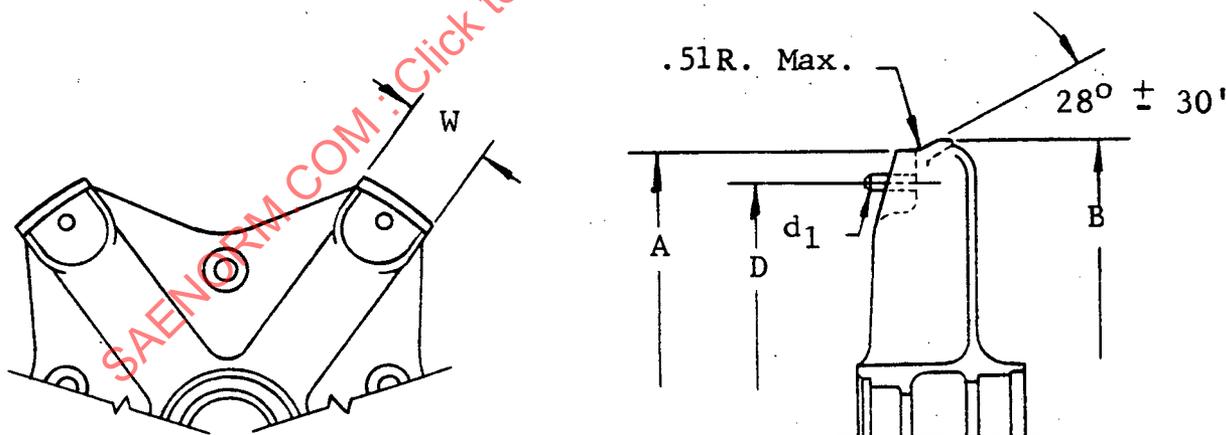


FIG. 1A: FRONT WHEEL

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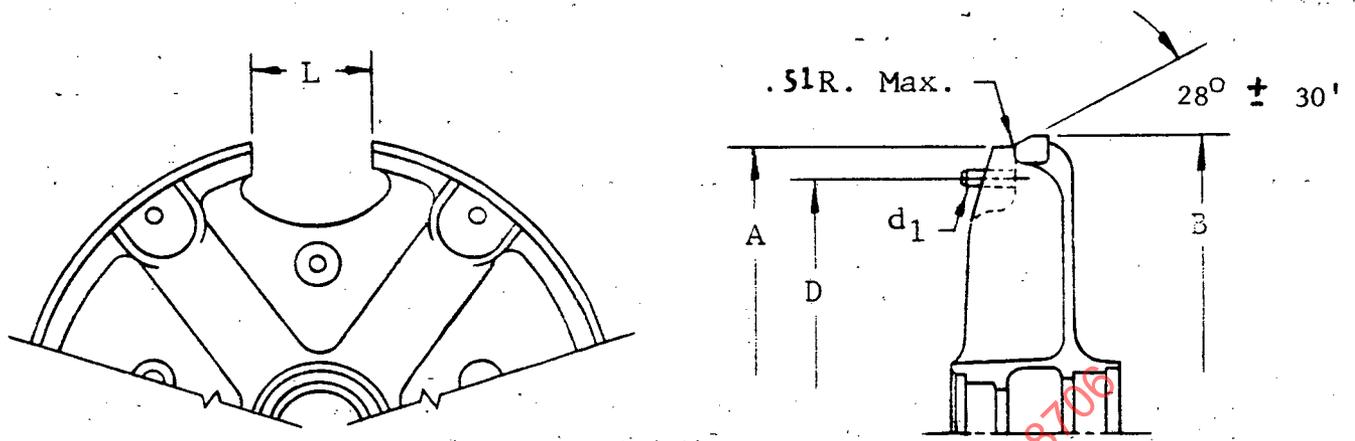


FIG. 1B: FRONT WHEEL WITH SPECIAL RIM LOCATOR SLOT

3.2 Rear Wheel for Demountable Rims:

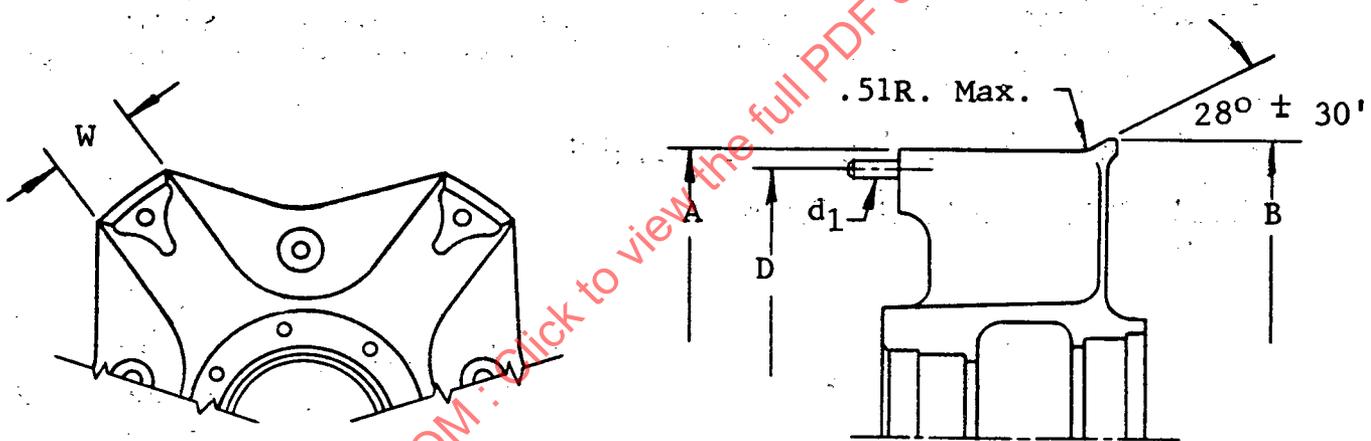


FIG. 2A: REAR WHEEL

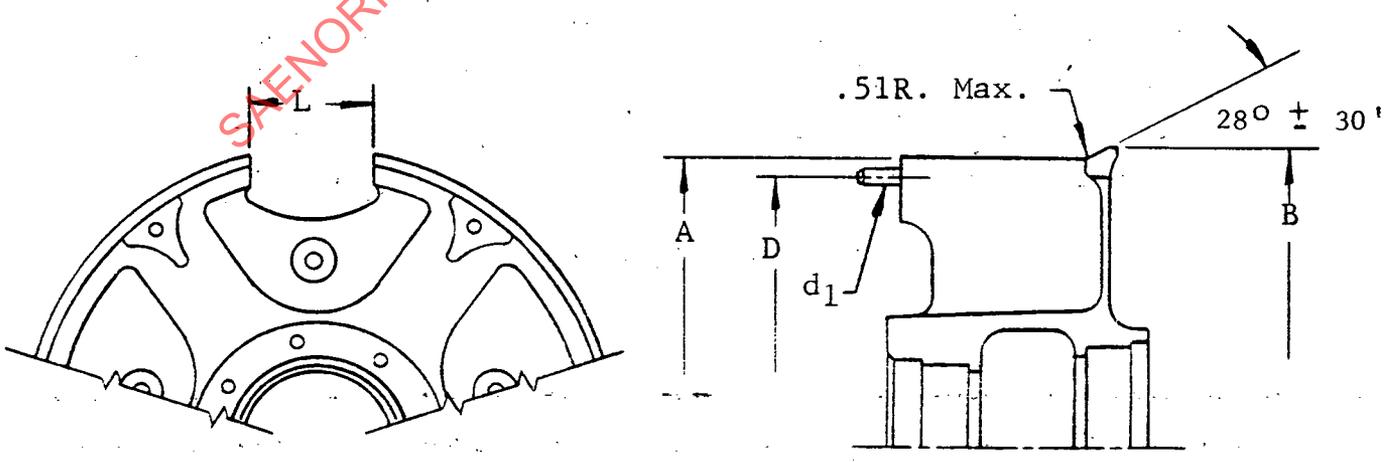


FIG. 2B: REAR WHEEL WITH SPECIAL RIM LOCATOR SLOT

3.3 Definition of Wheel Dimensions (see paragraph 3.4 for values):

- A = Rim mounting diameter (when used).
- B = Outside diameter.
- D = Nominal rim clamp stud or bolt circle diameter.
- d₁ = Rim clamp stud or bolt (size and thread).
- W = Bevel width (rim contact bearing width).
- L = Rim locator width (minimum of one slot).

3.4 Wheel Dimensions and Tolerances:

RIM SIZE	A ⁺⁰ -.015	B ⁺⁰ -.030	D (Ref.)		W(MIN.)	L(MIN.)	d ₁	
			FRONT	REAR			INCHES	M.M.
15 x 8.0 Max.	13.550	14.365	12.500	12.500	2.00	3.90	3/4-10	M20x2.5
20 x 8.0 Max.	18.550	19.365	17.500	17.500	2.50	3.90	3/4-10	M20x2.5
22 x 8.0 Max.	20.550	21.365	19.500	19.500	2.75	4.60	3/4-10	M20x2.5
24 x 8.0 Max.	22.550	23.365	21.500	21.500	2.75	5.40	3/4-10	M20x2.5
A11 17.5	13.550	14.365	12.500	12.500	2.00	3.90	3/4-10	M20x2.5
A11 22.5	18.550	19.365	17.500	17.500	2.50	3.90	3/4-10	M20x2.5
A11 24.5	20.550	21.365	19.500	19.500	2.75	4.60	3/4-10	M20x2.5
20 x 8.5 to 10.0	18.422*	19.281	17.500(1)	17.375	2.75	3.90	3/4-10	M20x2.5
22 x 8.5 to 10.0	20.422*	21.281	19.500	19.375	2.75	4.60	3/4-10	M20x2.5
24 x 8.5 to 10.0	22.422*	23.281	21.500(2)	21.375	2.75	5.40	3/4-10	M20x2.5

*Tolerance +0 - .023

- (1) With double bevel rims a bolt circle diameter of 16.625 can be used
- (2) With double bevel rims a bolt circle diameter of 20.625 can be used

4. RIM DIMENSIONS:

4.1 Demountable Rims:

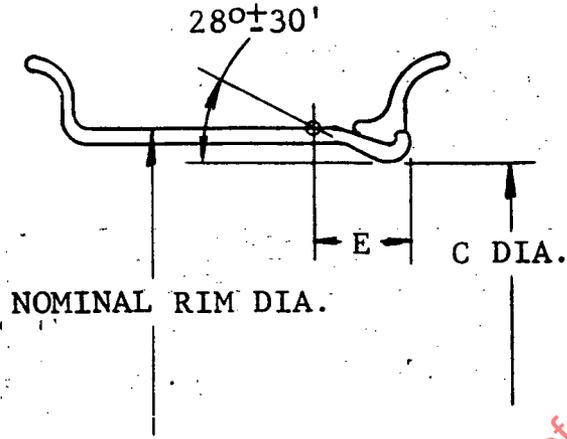


FIG. 3 - MULTI-PIECE FLAT BASE RIM

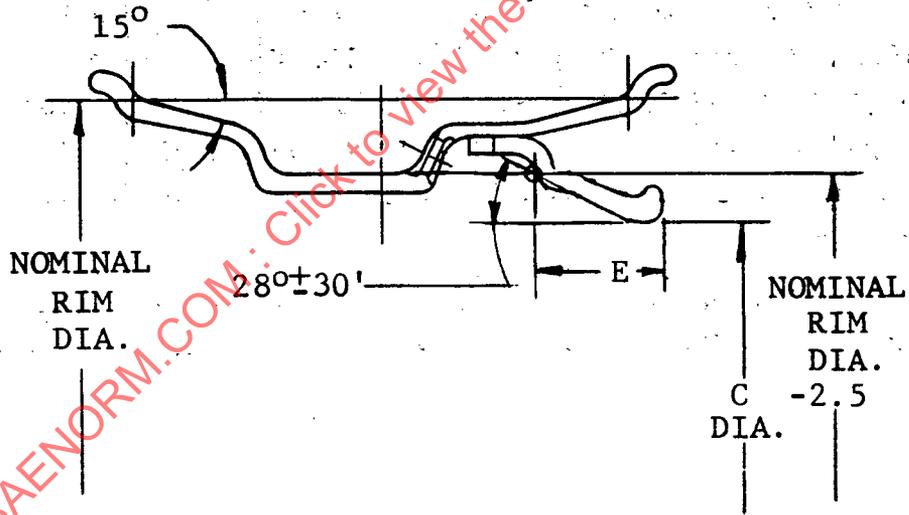


FIG. 4 - 15° FULL DROP CENTER RIM

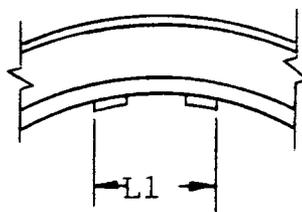


FIG. 5 - VALVE LOCATOR WIDTH

4.2 Definition of Dimensions:

C = Cylindrical gauge diameter

E = Rim bevel intersection (28° layout line)

L1 = Valve locator width

4.3 Demountable Rim Dimensions and Tolerances:

RIM SIZE	C(MIN.)	E ₊₀₄₀	L ₁ (MAX.)
15 x 8.0 Max.	13.550	1.762	3.810
20 x 8.0 Max.	18.550	1.762	3.810
22 x 8.0 Max.	20.550	1.762	4.560
24 x 8.0 Max.	22.550	1.762	5.310
A11 17.5	13.550	1.762	3.810
A11 22.5	18.550	1.762	3.810
A11 24.5	20.550	1.762	4.560
20 x 8.5 to 10.0	18.422	2.000	3.820
22 x 8.5 to 10.0	20.422	2.000	4.560
24 x 8.5 to 10.0	22.442	2.000	5.310

5. RIM SPACER DIMENSIONS:

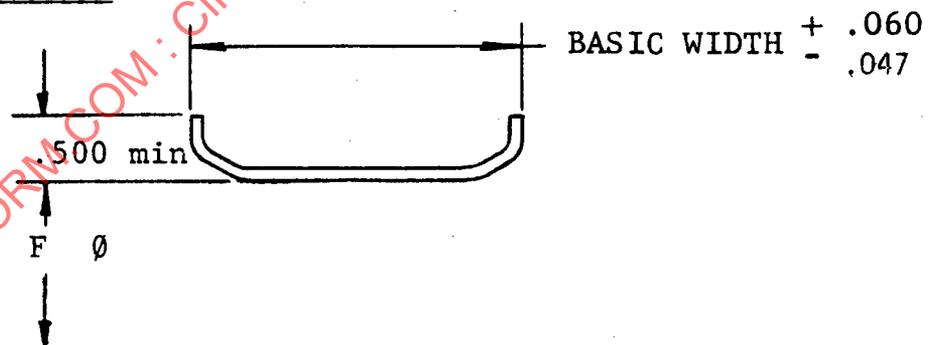


FIG. 6 - RIM SPACER

5.1 Definition of Dimensions:

F = Inside diameter if made as a continuous hoop. If made to fit each spoke separately, spacer should provide a circumferential locator to the spoke. Details of this locator to be left to individual spacer and wheel manufacturer.

5.2 Rear Wheel Rim Spacer Dimensions and Tolerances:

RIM SIZE	F ^{+0.094} -0
15 x 8.0 Max.	13.578
20 x 8.0 Max.	18.578
22 x 8.0 Max.	20.578
24 x 8.0 Max.	22.678
A11 17.5	13.578
A11 22.5	18.578
A11 24.5	20.578
20 x 8.5 to 10.0	18.459
22 x 8.5 to 10.0	20.459
24 x 8.5 to 10.0	22.459

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