



SURFACE VEHICLE RECOMMENDED PRACTICE

J1865™

NOV2020

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Reaffirmed 2020-11

Superseding J1865 JUL2016

Dimensional Compatibility for Commercial Vehicles
Fitment of Complete Wheels in Drum Brake Applications - Truck and Bus

RATIONALE

SAE J1865 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Recommended Practice defines a clearance line for establishing dimensional compatibility between drum brakes and wheels with 19.5 inch, 22.5 inch, and 24.5 inch diameter rims. Wheels designed for use with drum brakes may not be suitable for disc brake applications. The lines provided establish the maximum envelope for brakes, including all clearances, and minimum envelope for complete wheels to allow for interchangeability.

This document addresses the dimensional characteristics only, and makes no reference to the performance, operational dynamic deflections, or heat dissipation of the system. Valve clearances have not been included in the fitment lines. Bent valves may be required to clear brake drums. Disc brake applications may require additional running clearances beyond those provided by the minimum contour lines. Mounting systems as noted are referenced in SAE J694.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

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

SAE J694 Disc Wheel/Hub or Drum Interface Dimensions - Truck and Bus

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For more information on this standard, visit
https://www.sae.org/standards/content/J1865_202011

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 ISO Publications

Available at <http://webstore.ansi.org/>

ISO 3911 Wheels and rims for pneumatic tyres - Vocabulary, designation and marking ISO 4107 Commercial vehicles - Wheel-hub attachment dimensions

3. DEFINITIONS

A detailed list of basic nomenclature is contained in SAE J393.

4. CLEARANCE LINES

See Table 1.

Table 1 - Clearance lines

Wheel Size	Mounting System	Figure
19.5 x 6.75	II, 8 hole 275 mm	Figure 1
19.5 x 6.75	XIV, 8 hole 275 mm	Figure 2
19.5 x 7.50	XIV, 8 hole 275 mm	Figure 3
19.5 x 8.25	III, 10 hole 285.75 mm	
22.5 x 7.50	XIV, 8 hole 275 mm	Figure 4
22.5 x 8.25	III, 10 hole 285.75 mm	
22.5 x 9.00		
24.5 x 8.25		
22.5 x 6.75	IV, 10 hole 335 mm	Figure 5
22.5 x 7.50		
22.5 x 8.25		
22.5 x 9.00		
24.5 X 8.25		

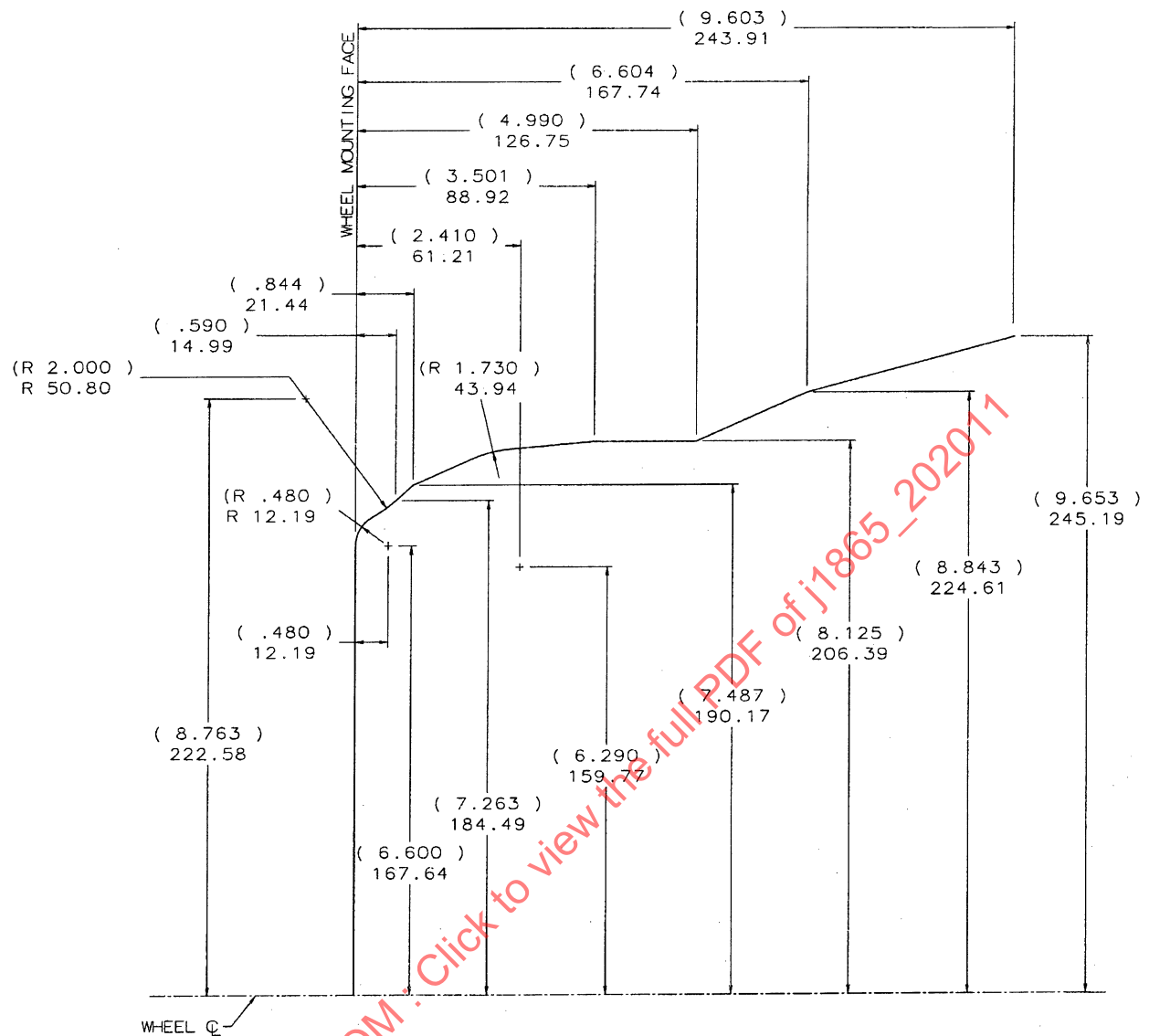


Figure 1- Clearance line:19.5 x 6.75 wheels, mounting system ii

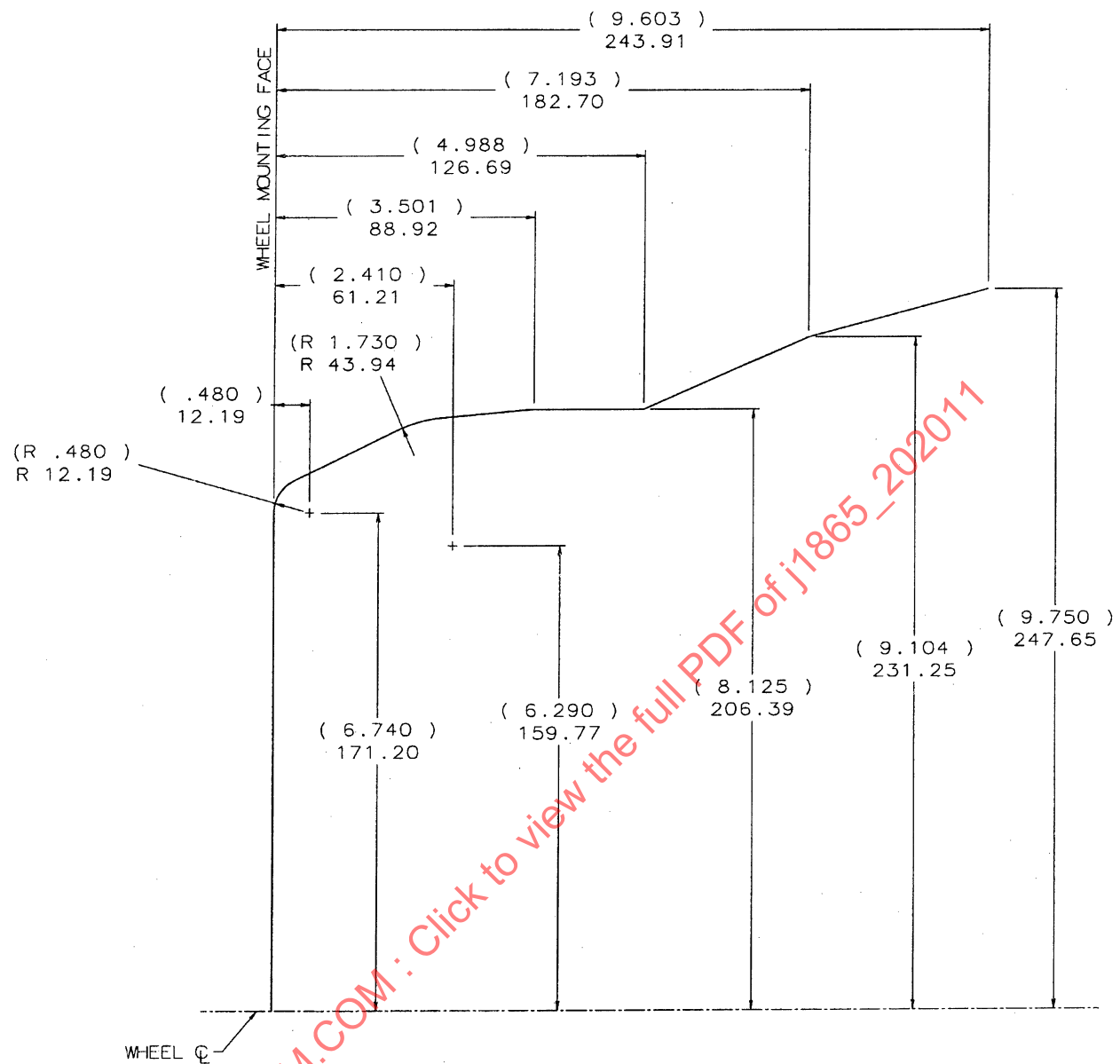


Figure 2 - Clearance line: 19.5 x 6.75 wheels, mounting system xiv

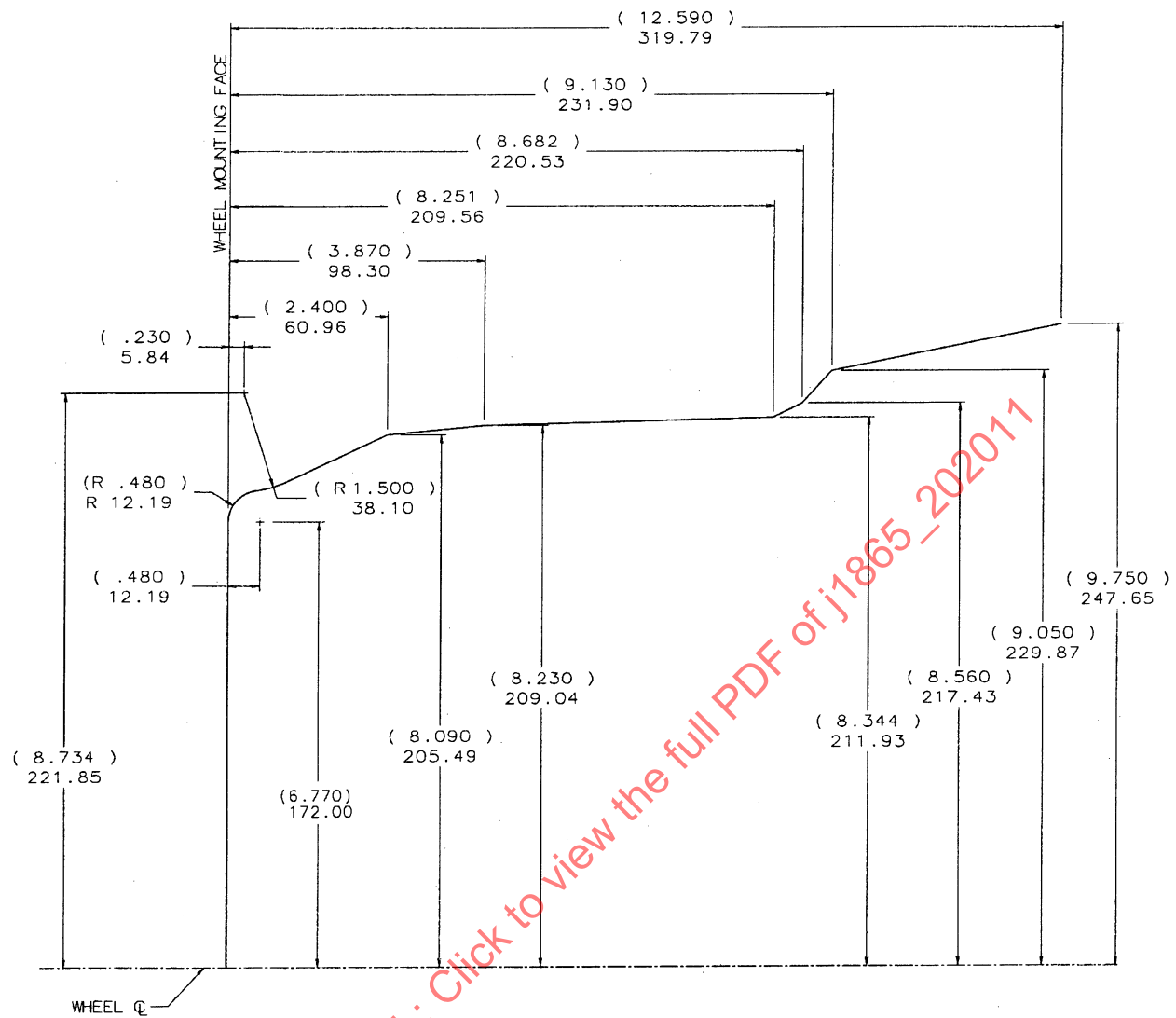


Figure 3 - Clearance line: 19.5 x 7.50 and 8.25 wheels, mounting systems iii and xiv

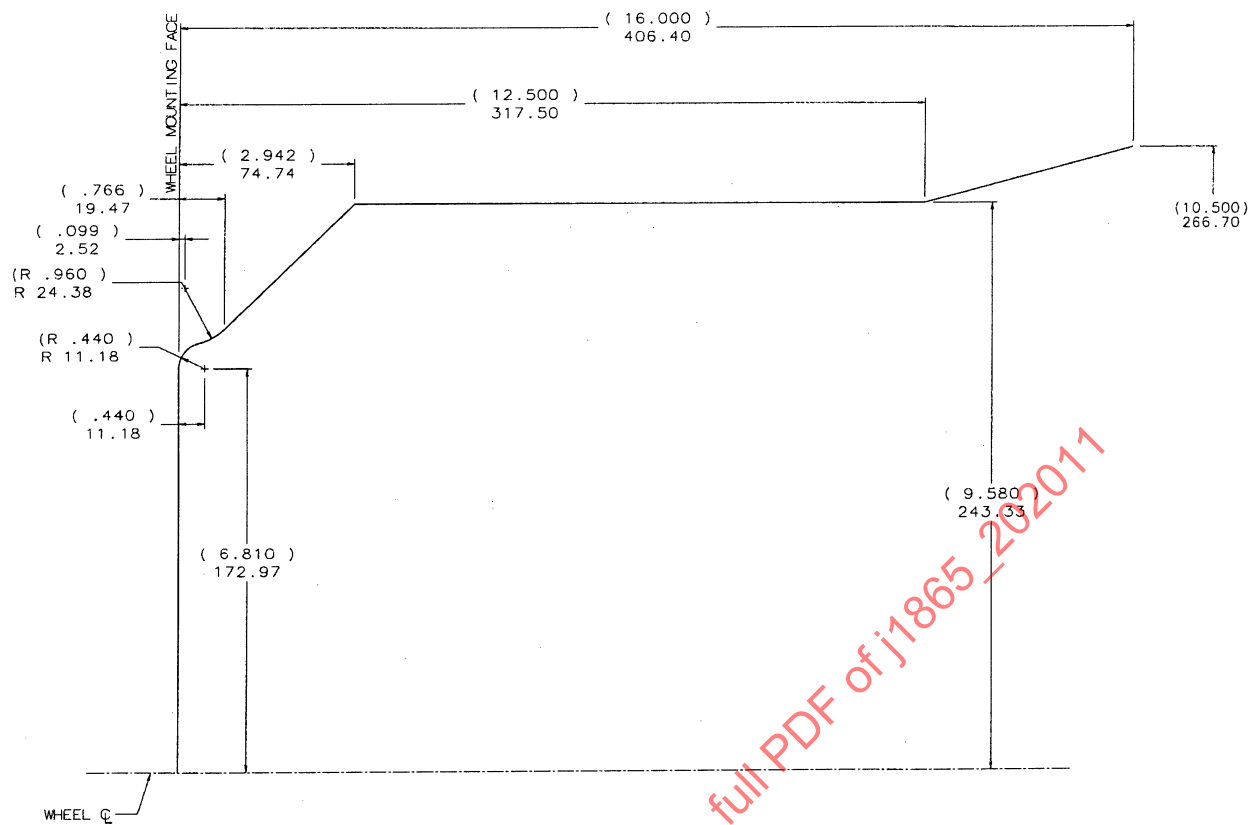


**Figure 4 - Clearance line: 22.5 x 7.50, 8.25, and 9.00 wheels, mounting systems iii and xiv
24.5 x 8.25 wheels, mounting systems iii and xiv**