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Supersedes J849b

Submitted for recognition as an American National Standard

(R) CONNECTION AND ACCESSORY LOCATIONS FOR TOWING MULTIPLE TRAILERS

Foreword—This Document has not changed other than to put it into the new SAE Technical Standards Board Format

1. **Scope**—This SAE Recommended Practice applies to all commercial trailers except drop frame and car haul types.

2. **References**

2.1 **Applicable Publications**—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J560—Seven-Conductor Electrical Connector for Truck-Trailer Jumper Cable

SAE J702b—Brake and Electrical Connection Locations - Truck-Tractor and Truck-Trailer

3. **Connection And Mounting Structure**—Connection and mounting structure should conform to the dimensional parameters of Figures 1 and 2 and must withstand 3.1 or 3.2 without residual deformation to the mounting or trailer structure.

3.1 **Application Type I**—(See Figure 3)—Towing application where the static vertical loading at the coupling (hitch) does not exceed 5% of the T.V.W. (Towed Vehicle Weight) of the attached trailer:

Horizontal Load: 115% of T.V.W. of towed trailer(s).

Vertical Load: 25% of the T.V.W. of the attached trailer only.

3.2 **Application Type II**—(See Figure 3)—Towing application where the static vertical loading at the coupling (hitch) is greater than 5% but does not exceed 20% of the T.V.W. of the attached trailer:

Horizontal Load: 115% of T.V.W. of towed trailer(s).

Vertical Load: 50% of the T.V.W. of the attached trailer only.

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4. **Brake And Electrical Connections**—Brake and electrical connections should be located as shown in Figure 1.

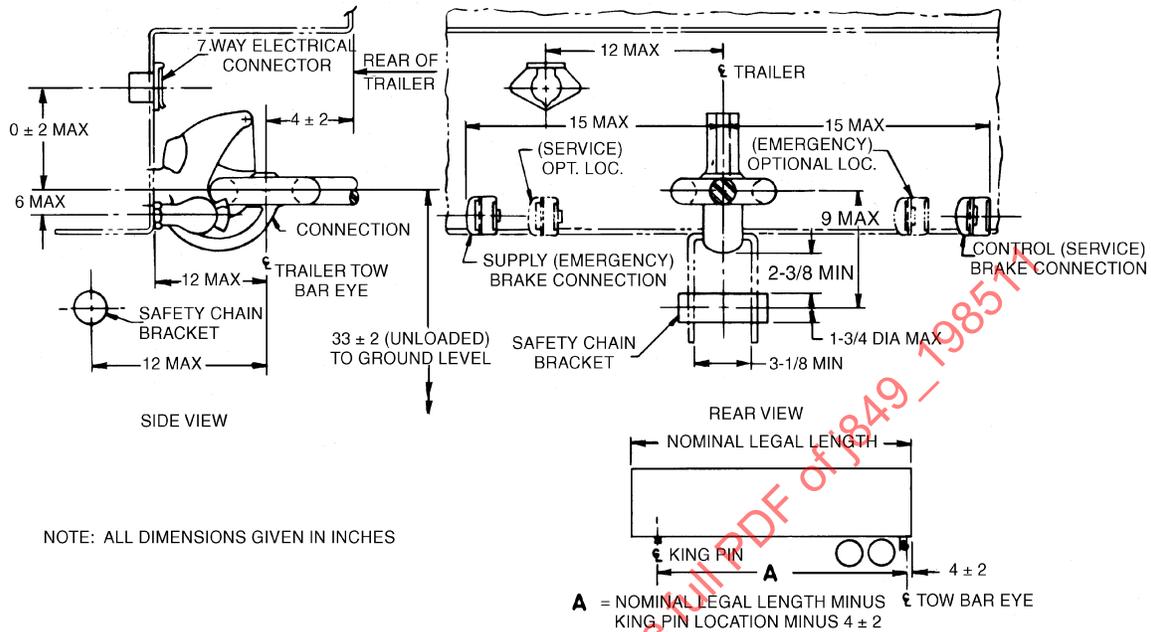
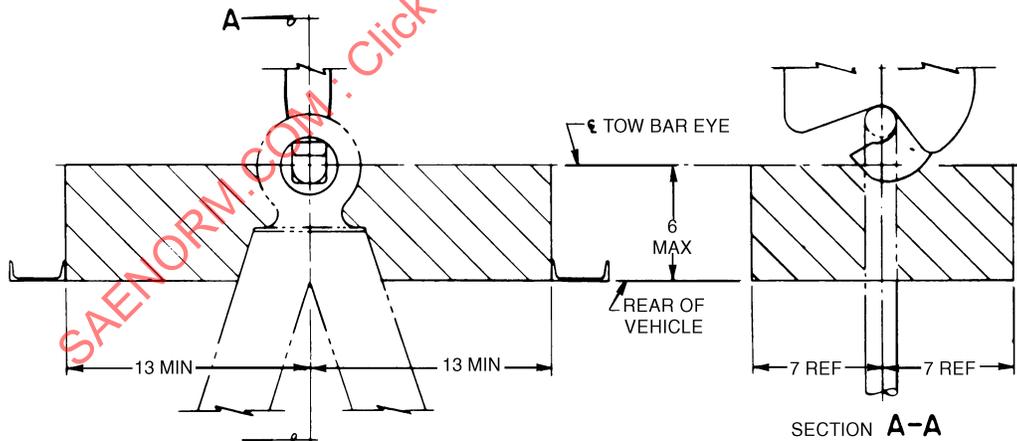


FIGURE 1—

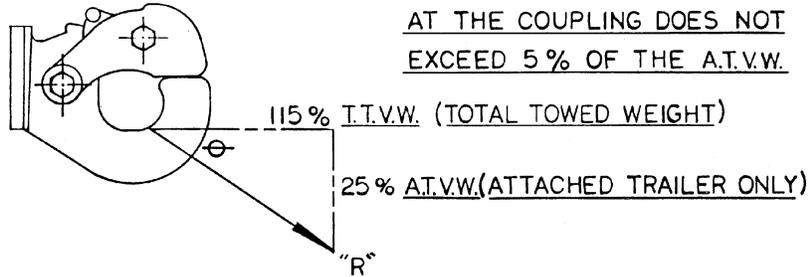


Clearance space shown must extend 7 in. above and 7 in. below the horizontal centerline of the drawbar eye as shown in Section A-A.

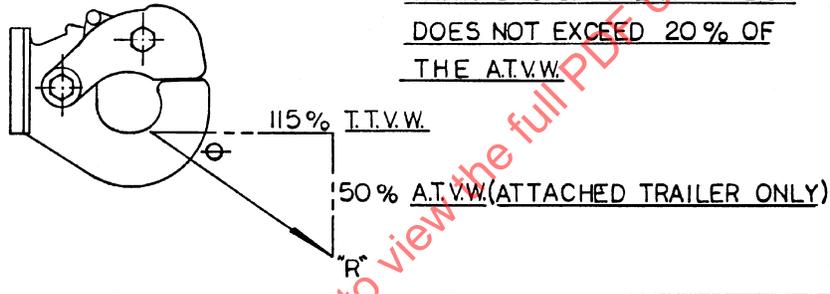
NOTE: All dimensions given in inches.

FIGURE 2—

APPLICATION TYPE I: TOWING APPLICATION WHERE THE STATIC VERTICAL LOADING AT THE COUPLING DOES NOT EXCEED 5% OF THE A.T.V.W.



APPLICATION TYPE II: TOWING APPLICATIONS WHERE THE STATIC VERTICAL LOADING AT THE COUPLING IS GREATER THAN 5% OF THE A.T.V.W. BUT DOES NOT EXCEED 20% OF THE A.T.V.W.



<u>TYPE</u>	<u>TEST LOAD "R"</u>	<u>ANGLE θ</u>
<u>I</u>	$\sqrt{(25\% \text{ A.T.V.W.})^2 + (115\% \text{ T.T.V.W.})^2}$	$\text{SINE } \theta = \frac{25\% \text{ A.T.V.W.}}{R}$
<u>II</u>	$\sqrt{(50\% \text{ A.T.V.W.})^2 + (115\% \text{ T.T.V.W.})^2}$	$\text{SINE } \theta = \frac{50\% \text{ A.T.V.W.}}{R}$

NOTE: T.T.V.W.(TOTAL TOWED VEHICLE WEIGHT)
A.T.V.W.(ATTACHED TRAILER TOWED VEHICLE WEIGHT)
A.T.V.W. = T.T.V.W. When Only One Trailer is Being Pulled.

FIGURE 3—

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- 4.1 **Connection Location at Front of Trailer(s)**—Brake and electrical connections at the front of a trailer should be located in accordance with SAE J702b.
- 4.2 **Electrical Connections**—The electrical connection should meet the provisions contained in SAE J560.
5. **Notes**
- 5.1 **Marginal Indicia**—The change bar (I) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

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