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Deflection Limiting Volume - Protective Structures Laboratory Evaluation		

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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This standard is technically equivalent to ISO 3164-1995 if normal horizontal and vertical seat adjustment is provided.

1. Scope—This SAE Standard applies to operator protective structures which may commonly be a part of construction, forestry, mining, and industrial machines.

1.1 Purpose—To establish limits on deflection permissible during laboratory evaluations of certain operator protective structures, such as ROPS, FOPS, OPS, and FOG as defined in other SAE standards.

2. References

2.1 Applicable Publications—The following publications form 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 PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J833—Human Physical Dimensions

SAE J1163—Determining Seat Index Point (SIP)

2.1.2 ISO PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO 3164—Earth-moving machinery—Laboratory evaluations of protective structures—Specifications for deflection limiting volume

3. Definitions

3.1 Deflection Limiting Volume (DLV)—An orthogonal approximation of a large, seated, male operator as defined in SAE J833 wearing normal clothing and a protective helmet as shown in Figure 1.

3.2 SIP Reference Axis—A horizontal axis for positioning the DLV with respect to the seat index point Figure 1.

4. Requirements

4.1 Accuracy—For purposes of this document, all linear dimensions of the DLV shown in Figure 1 shall have an accuracy of ± 5 mm. The accuracy of locating the DLV with respect to the Seat Index Point (SIP) of SAE J1163 shall be ± 13 mm.

