SAE International™ SURFACE VEHICLE STANDARD

SAE J1112

CAN-CELLED OCT03

Issued 1975-05
2003-10

Superseding J1112 FEB94

Specification Definitions—Skidder—Grapple

1. ***Scope***—This SAE Standard establishes definitions of specifications most commonly associated with grapple skidders. Specifications common to all articulated, rubber-tired log skidders are included in SAE J1110. The dimensions included in this document are basic and may be supplemented by the individual machine manufacturer. Dimensions shall be stated in SI units. Illustrations used herein are not intended to include all existing commercial machines or to be exactly descriptive of any particular machine. They have been included to facilitate application of this document.

2. ***References***

2.1 Applicable Publication—The following publication forms 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 PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1110—Specification Definitions—Articulated, Rubber-Tired Log Skidder

2.2 Related Publication—The following publication is provided for information purposes only and is not a required part of this document.

2.2.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1111—Component Nomenclature—Skidder-Grapple

3. ***Definitions***—(See Figures 1, 2, 3, 4, 5, 6 and 7 for illustrations).

3.1 Grapple Rotation—Total number of degrees through which the grapple can rotate. If rotation is continuous through more than 360 degrees, state as "continuous," and, if grapple does not rotate, state as "fixed."

3.2 Reach (A, B, C, D)—The horizontal distance from the vertical center of the rear axle to the vertical center of the grapple fore and aft pivot under the following conditions:

A. With the pivot in the highest, fully extended position.
B. With the pivot in the lowest, fully extended position.
C. With the pivot in the highest, fully retracted position.
D. With the pivot in the lowest, fully retracted position.

TO PLACE A DOCUMENT ORDER:
Tel: 877-606-7323 (inside USA and Canada)
Tel: 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: custsvc@sae.org
SAE WEB ADDRESS: http://www.sae.org

3.3 Lift (E, F, G, H)—The vertical distance from the horizontal center of the rear axle to the horizontal center of the grapple fore and aft pivot under the following conditions:

E. With the pivot in the highest, fully retracted position.
F. With the pivot in the highest, fully extended position.
G. With the pivot in the lowest, fully retracted position.
H. With the pivot in the lowest, fully extended position.

3.4 Boom Swing, Right (J)—The right-hand angle in degrees from the longitudinal axis of the machine to the longitudinal center of the boom in maximum swing position.

3.5 Boom Swing, Left (K)—The left-hand angle in degrees from the longitudinal axis of the machine to the longitudinal center of the boom in maximum swing position.

3.6 Rear Axle to Main Swing Boom Pivot (L)—The horizontal distance from the vertical center of the rear axle to the vertical center of the main swing boom pivot.

3.7 Grapple Height—The vertical distance from the center of the upper pivot to the lowest point of the grapple arms under the following conditions:

M. With grapple fully open.
N. With grapple in tip to tip position.
P. With grapple fully closed.

3.8 Maximum Grapple Opening (Q)—The horizontal distance between the tips of the grapple arms when the grapple is fully open.

3.9 Area of Opening (R)—The available area with the grapple arms in tip to tip position.

3.10 Minimum Log Size (S)—The smallest diameter of a log which the grapple can hold in a fully closed position.

NOTE—The terms right hand and left hand as used herein refer to the right-hand and left-hand sides, respectively, of the operator when seated in the machine facing forward in the normal direction of travel.

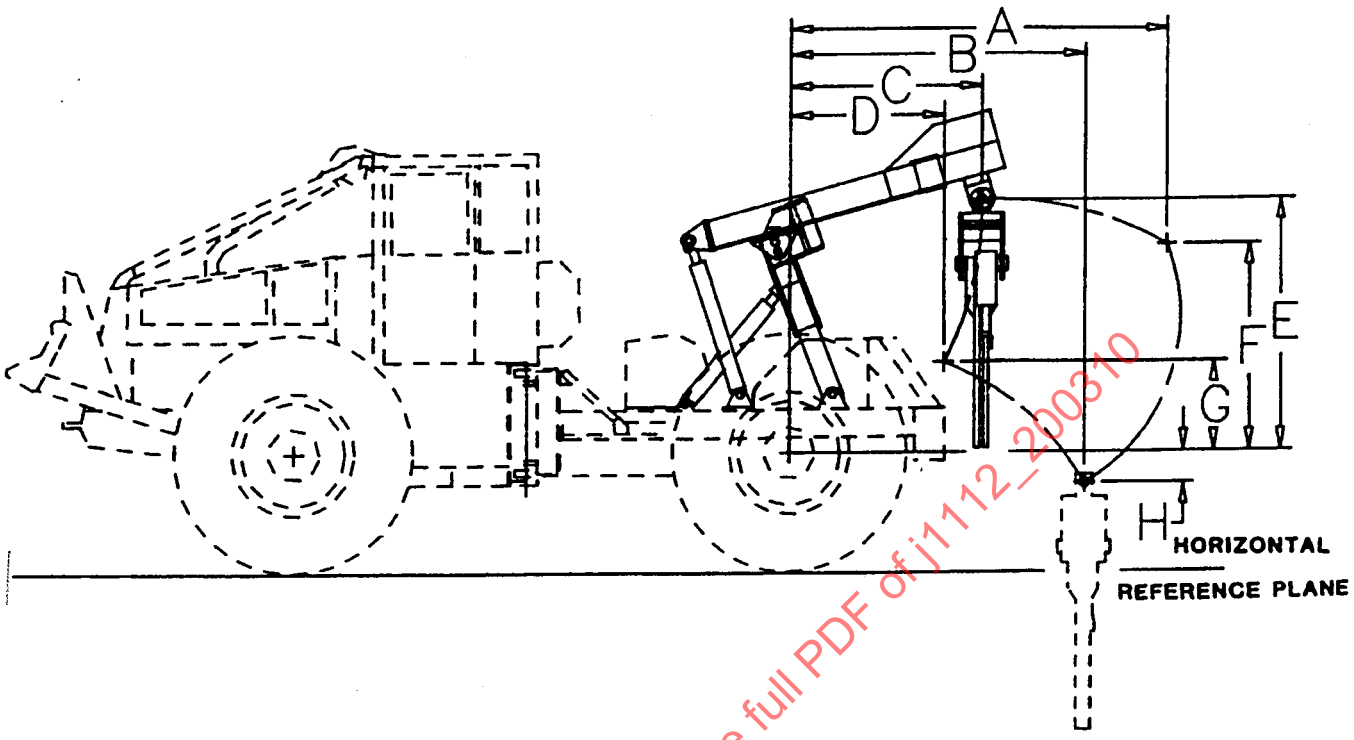

FIGURE 1—DUAL FUNCTION BOOM ASSEMBLY

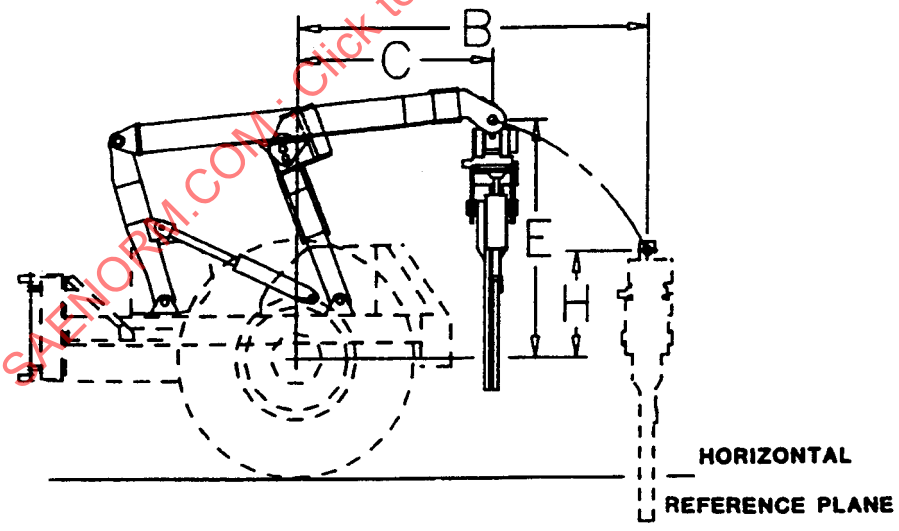

FIGURE 2—DUAL ARCH BOOM ASSEMBLY

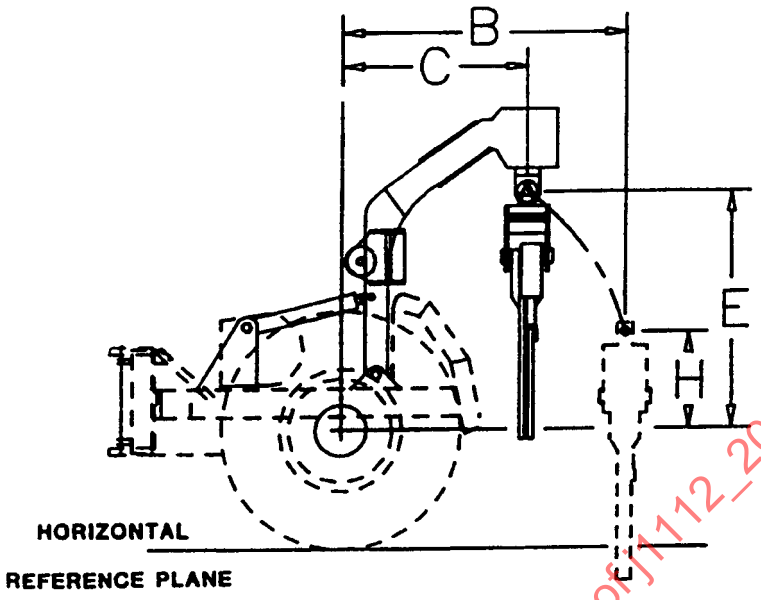

FIGURE 3—SINGLE FUNCTION BOOM ASSEMBLY

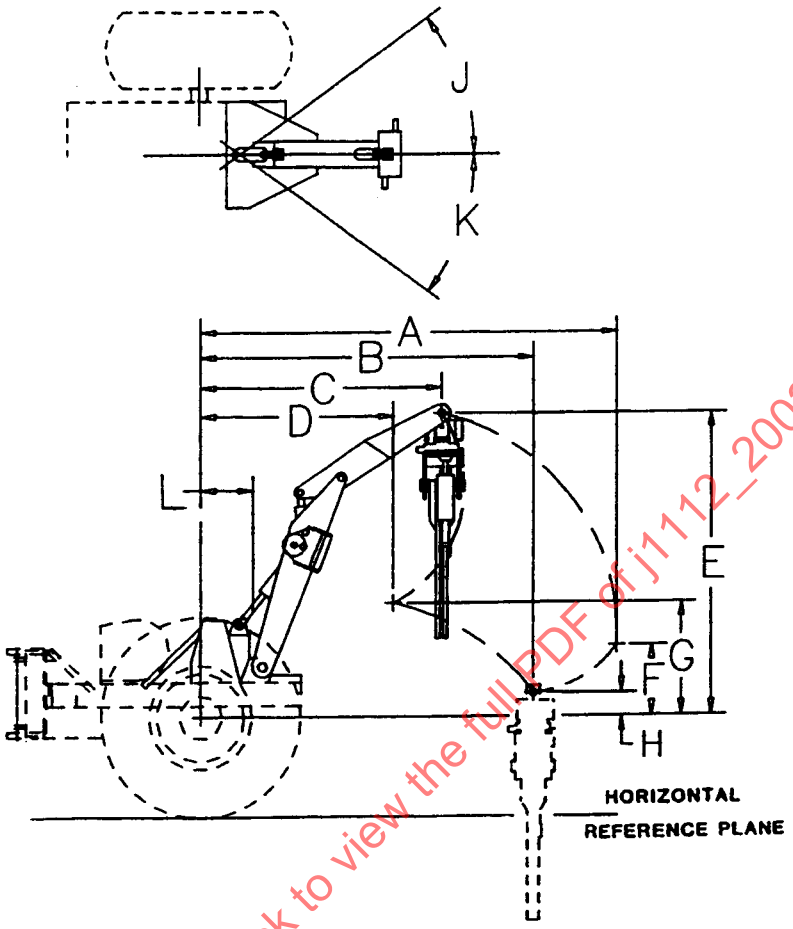

FIGURE 4—SWING BOOM ASSEMBLY

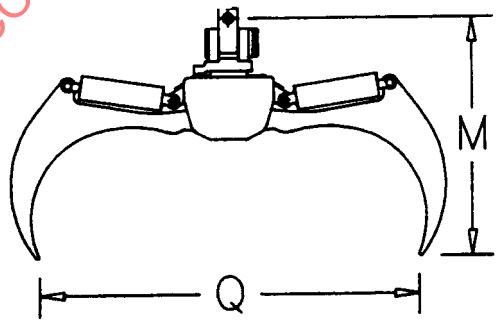

FIGURE 5—FULLY OPEN GRAPPLE