SAE International™ SURFACE VEHICLE STANDARD

SAE J1295 CAN-CELLED MAY2003

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Superseding J1295 JUN1989

Identification Terminology and Specification Definitions—Pipelayers and Side Booms, Tractor or Loader Mounted

Foreword—This cancelled document has been superseded by SAE J/ISO 7136.

1. Scope—This is applicable to pipelayers and side booms, mounted on tractors or loaders defined in SAE J1057. Only those terms not covered by SAE J1234 are described herein.

1.1 Purpose—The purpose of this standard is to establish identification terminology and specification definitions for pipelayers and side booms, tractor or loader mounted.

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 J1057 SEP88—Identification Terminology of Earthmoving Machines
SAE J1234 JAN85—Specification Definitions—Off-Road Work Machines

3. Definitions

3.1 Pipelayer—A self-propelled crawler machine specifically designed to handle and lay pipes and carry pipeline equipment. The machine has specially designed components such as undercarriage, main frame, counterweights, boom and load hoist mechanisms and a vertically pivotable side boom.

3.2 Side Boom, Tractor or Loader Mounted—An attachment, added to a tractor or a loader (wheel or crawler type machine), which is designed to handle and lay pipes and carry pipeline equipment. The attachment includes boom and load hoist mechanisms and a vertically pivotable side boom. It may or may not include counterweights.

3.3 Base Machine—A pipelayer as described by the manufacturer's specifications including the lifting (boom and hoist) mechanism and undercarriage.

3.4 Equipment—A set of components (boom and counterweights) mounted to the base machine to fulfill the primary design function of a pipelayer.

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3.5 Masses

3.5.1 OPERATING MASS—The mass of the base machine with all equipment specified by the manufacturer, 75 kg operator, full fuel tank, full lubricating, hydraulic and cooling systems, and rope and hook.

3.5.2 SHIPPING MASS—The mass of the base machine without operator, with full lubricating, cooling and hydraulic systems, 10% of fuel tank capacity and with the equipment as specified by the manufacturer.

3.6 Boom—The structural member that supports the load.

3.7 Counterweight—Any additional removable weight and its removable support added to increase tipping load. There are two types of counterweights.

3.7.1 ADJUSTABLE—That portion of the counterweight that is movable.

3.7.2 NONADJUSTABLE—Counterweight fixed in one location on the machine.

4. Identification Terminology—The identification terminology is shown in Figure 1.

5. Specification Definitions—Refer to Figures 2, 3, 4, 5, and 6.

5.1 Lift Point Line—A vertical line through the center of the load hook.

5.2 Overall Width Without Counterweight (W1)—The overall width of the machine with boom, counterweight, and counterweight rack removed.

5.3 Width With Counterweight Retracted (W10)—Overall width of the machine with the boom removed and the adjustable counterweight retracted.

5.4 Width With Counterweight Extended (W11)—Overall width of the machine with the boom removed and the adjustable counterweight extended.

5.5 Load Overhang Distance (W12)

5.5.1 CRAWLER MACHINE—The horizontal and perpendicular distance from the lift point line to the outer edge of the outer track link rail on the boom side of the machine.

5.5.2 WHEEL MACHINE—The horizontal and perpendicular distance from the lift point line to a line connecting the centerline of the front and rear tires on the boom side of the machine.

5.5.3 MACHINE WITH OUTRIGGERS—The horizontal and perpendicular distance from the lift point line to a line connecting the centerline of the outrigger pads in their most favorable position.

5.6 Length of Boom (L13)—The straight line distance between the centerline of the boom foot pivot and the centerline of the top block pivot.

5.7 Overall Height (H2)—The height from the horizontal ground plane (HGP) to the highest point on the machine with the boom removed and the adjustable counterweights in the retracted position.

5.8 Shipping Height (H10)

5.8.1 CRAWLER MACHINES—The height from the tip of the grouser to the highest point on the machine without the boom, counterweight, exhaust pipe, air cleaner inlet pipe, or other easily-removable parts.

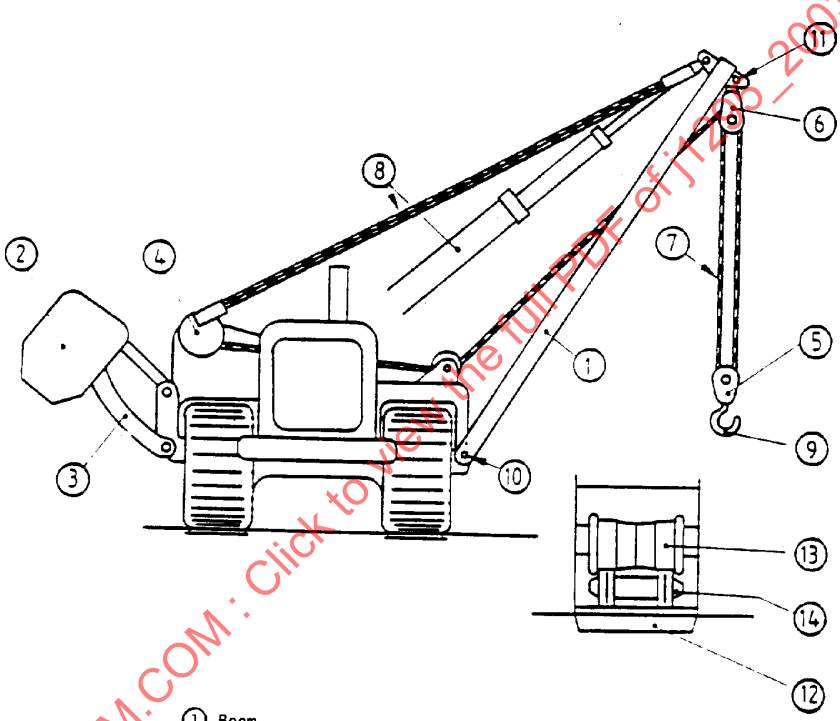
5.8.2 WHEEL MACHINES—The height from the HGP to the highest point on the machine without the boom, counterweight, exhaust pipe, air cleaner inlet pipe, or other easily-removable parts.

5.9 Grouser Height (H11)—The distance between the face of the track shoe and the tip of the grouser.

5.10 Height to Top of Retracted Counterweight (H20)—The height from the HGP to the highest point on the counterweight or frame when the adjustable counterweights are in the retracted position.

5.11 Clearance Under the Extended Counterweight (H21)—The height between the HGP and the lowest point on the counterweight when the adjustable counterweights are in the extended position.

5.12 Maximum Hook Height (H22)



① Boom
② Counterweight
③ Counterweight frame(s)
④ Load hoist and, if applicable, boom hoist drums
⑤ Load block, lower
⑥ Load block, upper
⑦ Load hoist rope
⑧ Boom hoist rope or boom cylinder
⑨ Load hook
⑩ Boom foot pivot
⑪ Upper load block pivot
⑫ Track shoe
⑬ Lower track roller
⑭ Track link

FIGURE 1—CRAWLER PIPELAYER

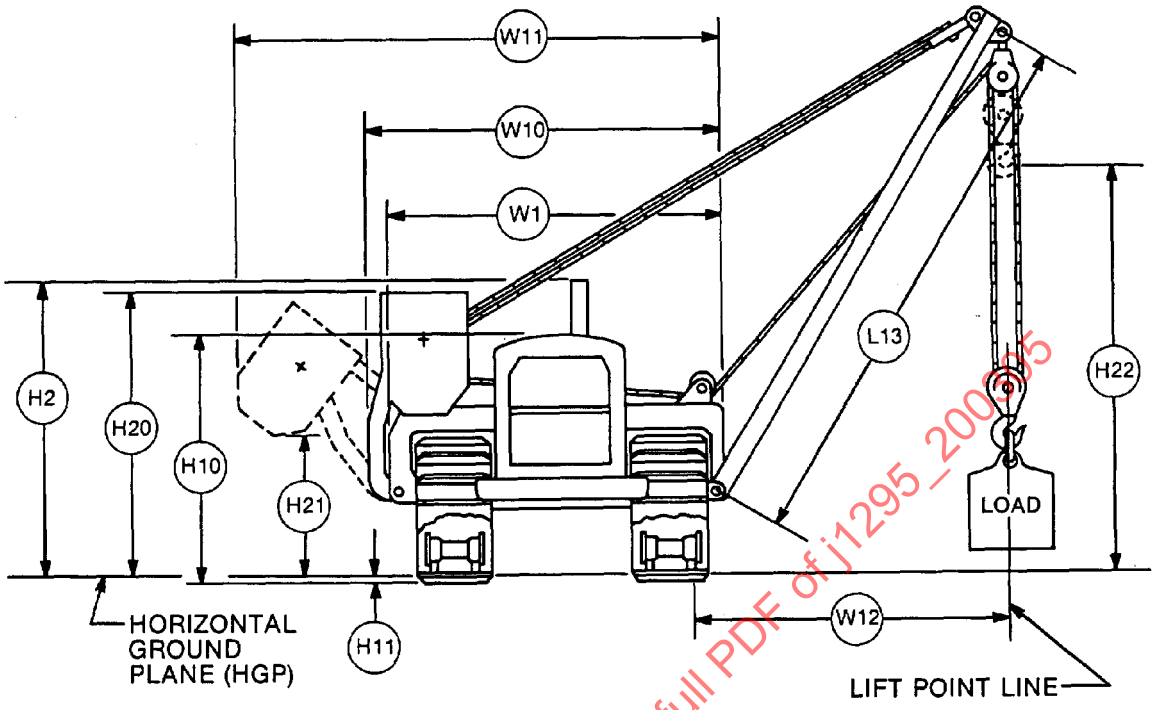


FIGURE 2—CRAWLER MACHINE

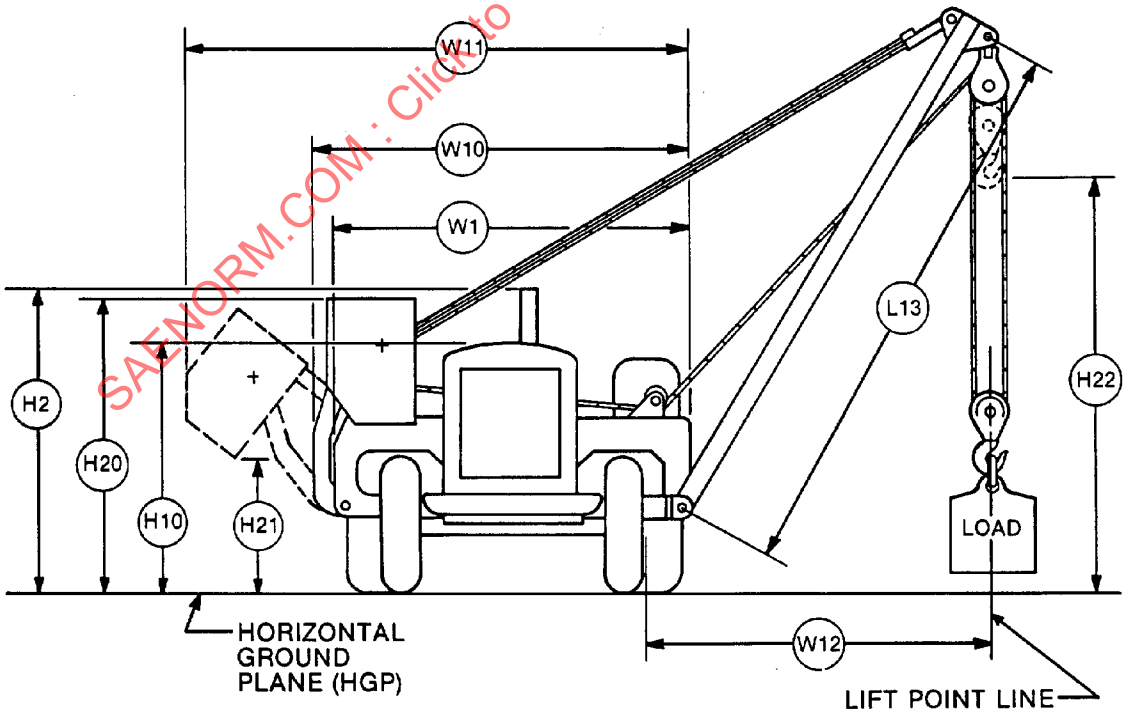


FIGURE 3—WHEEL MACHINE STEERED STRAIGHT

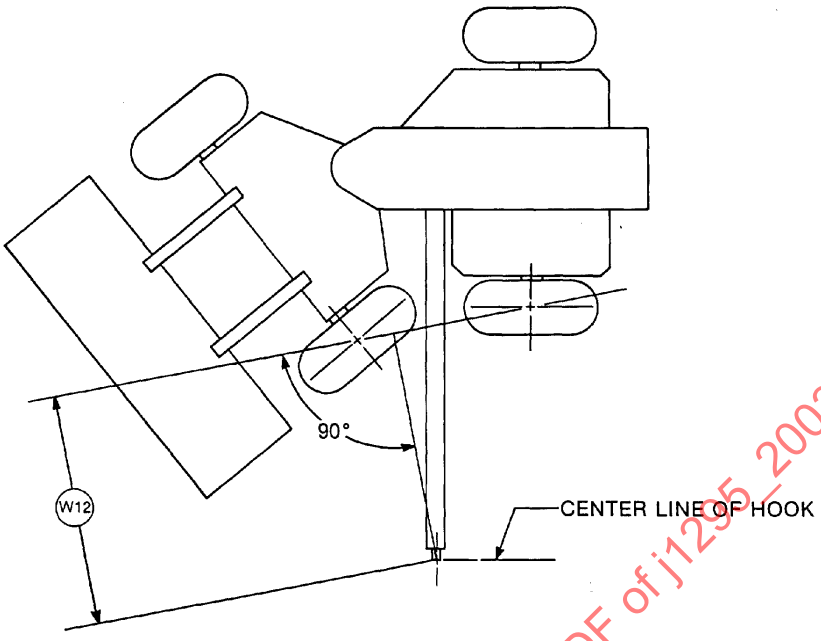


FIGURE 4—ARTICULATED WHEEL TRACTOR STEERED LEFT LOAD OVERHANG DISTANCE

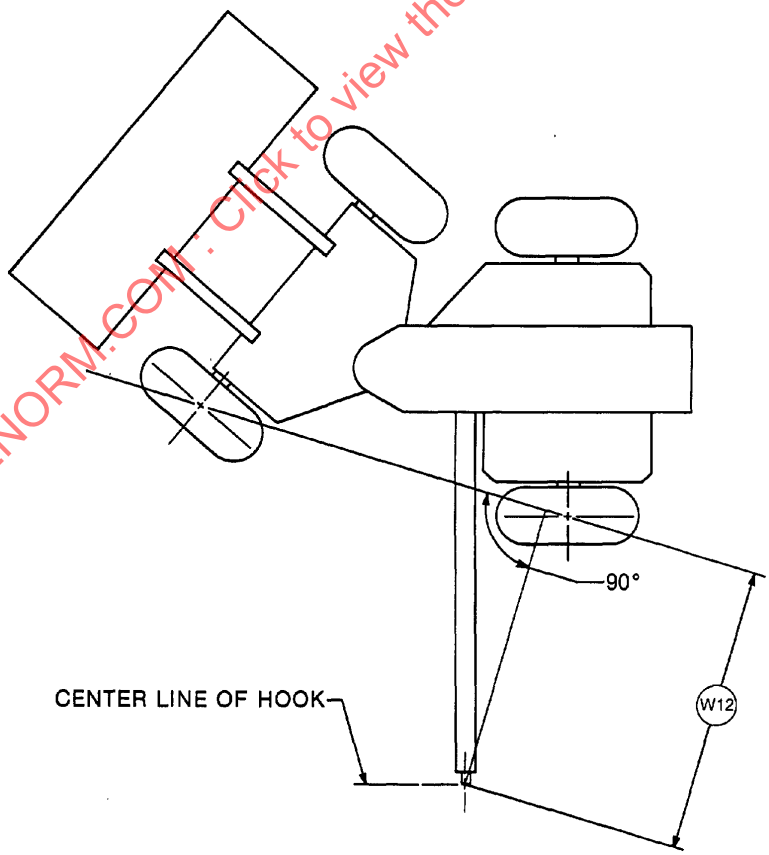


FIGURE 5—ARTICULATED WHEEL TRACTOR STEERED RIGHT LOAD OVERHANG DISTANCE