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SURFACE VEHICLE STANDARD

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(R) IDENTIFICATION TERMINOLOGY OF MOBILE FORESTRY MACHINES

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

***1. Scope*—**This SAE Standard describes a procedure and the terminology for identifying and classifying mobile forestry machines which may be portable or self-propelled. Identification is determined by endpoint usage as intended by the manufacturer's design objectives. This document applies to machines that are designed for use in site preparation, planting, transporting, and processing wood and wood fiber. Specifically excluded are machines used exclusively in sawmills or wood yards, on-highway transport vehicles, and aerial vehicles.

1.1 Purpose—The purpose of this SAE document is to establish common terminology for referring to various types of forestry machines. In addition, this document provides a method for identifying new machines.

2. References

2.1 Related 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 J1109 JAN88—Component Nomenclature—Articulated Log Skidder, Rubber Tires
SAE J1110 APR88—Specification Definitions—Articulated, Rubber-Tired Log Skidder
SAE J1111 MAR81—Component Nomenclature—Skidder-Grapple
SAE J1112 APR80—Specification Definitions—Skidder-Grapple
SAE J1116 JUN86—Categories of Off-Road Self-Propelled Work Machines
SAE J1255 JAN85—Specification Definitions—Feller/Buncher
SAE J1823 JUN91—Specification Definition—Articulated Rubber-Tired Forwarder
SAE J1824 JUN91—Specification Definitions—Clam Bunk Skidder
SAE J2055 JUN91—Identification Terminology & Component Nomenclature—Knuckle Boom Log Loader

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

ISO 6814:1983—Machinery for forestry—Mobile and self-propelled machinery—Identification vocabulary

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3. ***Primary Machine Function Definitions—***For the purpose of this document, the primary functions of forest operations will be identified and defined as one of the following (listed in order of operation). Major functions are defined as aids for naming and classifying forestry machines but do not include all possible forest operation functions.

3.1 Site Preparation and Planting

3.1.1 BEDDING—Reshaping the soil surface to provide a raised location for planting.

3.1.2 CHOPPING—Breaking downed material into shorter pieces by exerting a downward force with a narrow blade.

3.1.3 CLEARING—Removing unwanted logging residues, shrubs, trees, and stumps.

3.1.4 GRUBBING—Removing trees and stumps from an area by severing below the ground surface, lifting, and pushing into piles.

3.1.5 MULCHING—Applying a layer of organic matter to the surface of the soil.

3.1.6 PLANTING—Putting small trees or seedlings into the ground at their growing positions.

3.1.7 PLOWING—Shearing and turning mineral soil with a linear motion.

3.1.8 RAKING—Moving loose material using a toothed or comb-like device.

3.1.9 SCARIFYING—Preparing a site for regeneration by scarring the ground surface to penetrate the covering material and expose the soil underneath.

3.2 Forest Harvesting

3.2.1 BUNCHING—Gathering and arranging trees or parts of trees in bunches or heaps.

3.2.2 CHIPPING—Slicing trees into small pieces of specified dimensions.

3.2.3 DEBARKING—Removing bark from trees or parts of trees.

3.2.4 DELIMBING—Removing branches from trees or parts of trees.

3.2.5 FELLING—Cutting off or uprooting trees.

3.2.6 FORWARDING—Moving trees or parts of trees by carrying them.

3.2.7 HARVESTING—Felling combined with other primary functions.

3.2.8 LOADING—Picking up trees or parts of trees from the ground, or from a vehicle, and piling them on another vehicle.

3.2.9 PILING—Depositing trees or parts of trees in orderly piles.

3.2.10 PROCESSING—A combination of functions other than felling that change the form of the material.

3.2.11 SKIDDING—Transporting trees or parts of trees by trailing or dragging.

3.2.12 SLASHING (BUCKING)—Cutting felled or uprooted trees or parts of trees into lengths.

3.2.13 SORTING—Separating trees or parts of trees into groups based on particular attributes.

3.2.14 SPLITTING—Dividing trees or parts of trees longitudinally into pieces.

3.2.15 TOPPING—Cutting off the top of trees at a predetermined point.

3.2.16 YARDING—The initial haul from the stump to a collection point by means of a cable system.

4. Machine Classification—Mobile forestry machines are classified into major types by the specific functions or combinations of functions that they perform (i.e., skidder). Further classification may be required to differentiate between machines with basic conceptual differences that affect recognition or performance but perform the same basic function(s).

4.1 Subclassifications—One or more of the following criteria may be used to further classify forestry machines. Examples shown as follows do not include all possible classifications of machines.

4.1.1 MOBILITY METHOD—This describes the type of system for providing motion which may be self-propelled or portable.

EXAMPLE—Tracked, wheeled, towed.

4.1.2 MODE OF OPERATION—This describes a basic concept used to perform the function.

EXAMPLE—grapple, single-grip, shear, swing-to-load.

4.1.3 TREE SYSTEM—This describes the type of harvesting system the machine is designed for.

EXAMPLE—shortwood, tree-length, whole-tree.

4.1.4 FRAME TYPE—This describes the type of frame which the machine may require to perform its intended function.

EXAMPLE—rigid, articulated.

Only those subclassifications necessary to identify the machines in the context of use need be listed.

EXAMPLE—wheeled grapple skidder, tracked swing-to-load knuckleboom log loader.

5. Major Types of Forest Machines—Major types defined are aids for naming and identifying current forestry machines but do not include all possible machines nor do they represent any specific machine.

5.1 Single Function Machines

5.1.1 CHIPPER—A mobile machine designed to chip whole trees or parts of trees.

5.1.2 DEBARKER—A mobile machine designed to remove the bark from trees.

5.1.3 DELIMBER—A mobile machine designed to remove limbs from trees.

5.1.4 FELLER—A self-propelled machine designed to fell standing trees.

5.1.4.1 Shear

5.1.4.2 Saw

5.1.5 FORWARDER—A self-propelled machine designed to move trees or parts of trees by carrying them.

5.1.6 LOG LOADER—A machine with grapple and supporting structure designed to pick up and discharge trees or parts of trees for the purpose of piling or loading.

5.1.6.1 Knuckleboom

5.1.6.2 Cable

5.1.6.3 Front End

5.1.7 REGENERATION EQUIPMENT—Machines used in reforestation.

5.1.7.1 Hand Planting Equipment

5.1.7.2 Machine Planting Equipment

5.1.7.3 Direct Seeding Equipment

5.1.8 SKIDDER—A self-propelled machine designed to transport trees or parts of trees by trailing or dragging.

5.1.8.1 Cable Skidder

5.1.8.2 Grapple Skidder

5.1.8.3 Clam Bunk Skidder

5.1.9 SLASHER (BUCKER)—A mobile machine designed to cut felled trees into lengths.

5.1.9.1 Shear

5.1.9.2 Chain Saw

5.1.9.3 Circle Saw

5.1.10 SITE PREPARATION EQUIPMENT—Machines used to prepare cleared forest sites for planting or seeding.

5.1.10.1 Scarifiers

5.1.10.2 Rippers

5.1.10.3 Brushland Disks

5.1.10.4 Forest Plows

5.1.10.5 Trenchers

5.1.10.6 Mounders

5.1.10.7 Bedding Harrows

5.1.11 YARDER—A mobile machine designed to perform cable logging with the use of a tower which may be integral to the machine or a separate structure.