

Submitted for recognition as an American National Standard

**(R) Categories of Off-Road Work Machines**

**Foreword**—This Document has been changed to put it into close alignment with ISO categories and to update it.

1. **Scope**—This SAE Standard applies to machines that are in regular commercial production. Included are the following categories:

Earthmoving  
Implements and Attachments  
Agricultural Tractors  
Forestry

In spite of the appearance of the same names, such as *tractors* in more than one category, further development of this and related standards will demonstrate that there are differences in the fully-equipped working machine that may require distinction as to intended end-point field usage. These differences include:

Names of optional implements  
Names of components of optional implements  
Definitions of specification terms as affected by installed optional implements  
Different mounting provisions on the machines for implements and other attachments  
Differences in design to achieve objectives for performance, durability, or operator or public safety

1.1 **Purpose**—This document establishes categories of off-road work machines. See Table 1.

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 J1209—Identification Terminology of Mobile Forestry Machines  
SAE J/ISO 6165—Earthmoving Machinery—Basic Types—Vocabulary

2.1.2 ASAE PUBLICATION—Available from ASAE, 2950 Niles Road, St. Joseph, MI 49085-9659.

ASAE S390—Classifications and Definitions of Agricultural Equipment

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TABLE 1—OFF-ROAD WORK MACHINES

Earthmoving	Implements and Attachments	Agricultural Tractors	Forestry
Loaders <sup>(1)(2)</sup>	Flail Mowers	(All other agricultural implements and self-propelled machines are covered by standards developed by ASAE <sup>(3)</sup> . Examples of such machines include combines, cotton pickers, hi-clearance sprayers, forage harvesters, beet harvesters, balers, etc.)	Forwarders
Backhoe Loaders <sup>(1)(2)</sup>	Power Rakes		Fellers
Graders <sup>(2)</sup>	Backhoe Attachments		Self-Propelled Log Loaders
Tractor-Scrapers <sup>(2)</sup>			Feller-Bunchers
Dumpers <sup>(2)</sup>			Harvesters
Excavators <sup>(2)</sup>			Processors
Trenchers <sup>(2)</sup>			Mobile Yarders
Horizontal Earth Boring			
Soil Stabilizers			
Rollers and Compactors <sup>(2)</sup>			
Pipelayers <sup>(2)</sup>			
Pavers			
Cold Planers			
Sweepers			
Rubber Tired Haulage Machines			

Previously named machines are listed as examples. The lists are not intended to include all machines in current production.

1. Machines that appear in more than one category may have similar terminology but may have different performance, durability, or design requirements for safety objectives, and may have different provisions for optional attachments.
2. For machine identification terminology, see SAE J/ISO 6165.
3. For clarifications and definitions of agricultural equipment, see ASAE S390.

### 3. Off-Road Work Machines—Earthmoving

**3.1 Scope**—This document applies to machines that are in regular commercial production. They are used for moving earth and other material on projects such as roads, dams, open pit excavation, quarries, trenching, recycling, and building sites. Included are such machines as:

Tractors	Soil Stabilizers
Loaders	Rollers and Compactors
Dumpers	Pipelayers
Tractor-Scrapers	Horizontal Earth Boring
Excavators	Trenchers
Graders	Cold Planers
Sweepers	Backhoe Loaders
Rubber Tired Haulage Machines	Pavers

Also included are loaders where the bucket has been replaced by a fork attachment. Not included are machines intended for use on improved surfaces (except for sweeping) such as in-plant material handling, highway, water, air transport, or for agricultural purposes.

Refer to SAE J/ISO 6165 for identification terminology.

NOTE—Previously named machines are listed as examples. The lists are not intended to include all machines in current production.

**3.2 Purpose**—This document provides identification terminology for earthmoving machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

**4. Off-Road Work Machines—Implements and Attachments**

**4.1 Scope**—This document applies to implements and attachments that are in regular commercial production and are powered by machines of over 15 kW. They are used for mowing, public and commercial grounds keeping, and highway right-of-way maintenance. Included are such machines as:

- Rotary Mowers
- Flail Mowers
- Power Rakes
- Backhoe Attachments

NOTE—Previously named implements and attachments are listed as examples. The lists are not intended to include all products in current production.

**4.2 Purpose**—This document provides identification terminology for implements and attachments used on self-propelled work machines of over 15 kW. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

**5. Off-Road Work Machines—Agricultural Tractors**

**5.1 Scope**—This document applies to tractors that are in regular commercial production. They are designed primarily for use in agricultural operations for the production of food and fiber. For terminology of agricultural equipment, see ASAE S390. Most standards relating to the interface between tractors and implements are developed by ASAE.

**5.2 Purpose**—This document establishes the category for agricultural tractors.

**6. Off-Road Work Machines—Forestry**

**6.1 Scope**—This document applies to machines that are in regular commercial production. They are used in the harvesting, transporting, processing, plant, and site preparation for growing wood and wood fiber. Included are such machines as:

- Skidders
  - Wheeled
    - Cable
    - Grapple
    - Clam Bunk
  - Tracked
    - Cable
    - Grapple
    - Clam Bunk
- Forwarders
- Fellers
- Feller Bunchers
  
- Self-Propelled Log Loaders
- Harvesters
- Processors
- Mobile Yarders

Refer to SAE J1209 for Identification Terminology.

SAE J1116 Revised MAR1999

NOTE—Previously named machines are listed as examples. The lists are not intended to include all machines in current production.

**6.2 Purpose**—This document provides identification terminology for forestry machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

**7. Notes**

**7.1 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.

PREPARED BY THE SAE CONSTRUCTION-AGRICULTURE AND OFF-ROAD MACHINERY COUNCIL

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