



SURFACE VEHICLE STANDARD

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Superseding J1116 NOV2004

Categories of Off-Road Self-Propelled Work Machines

RATIONALE

This standard is being revised to remove agricultural tractors from the scope and update references to ASME which is no longer associated with the rough terrain fork trucks.

This change will allow this standard to be more easily used as a reference when needed to define the scope of other SAE standards. For SAE standards that are also applicable to agricultural tractors, the scope of the standard would then state in the scope section "... and Agricultural Tractors as defined in ANSI/SAE S390." This will eliminate the inadvertent application to agricultural tractors when SAE J1116 is broadly referenced in the scope section.

Regarding the current references to ASME, in 2005 responsibility for the B56 committees and standards was transferred from ASME to ITSDF (Industrial Truck Standards Development Foundation). The inclusion of Powered Industrial Trucks with the associated vocabulary (See Table 1) has been provided as a reference to provide a greater understanding to the other machine categories and associated vocabulary. A specific example cited is loader using fork attachment, which is covered by SAE standards versus purpose-built fork trucks, which are covered by ANSI/ITSDF standards.

FOREWORD

This Document has been updated to reflect the current machine categories for which the SAE Construction, Agricultural and Off-Road Machinery (ConAg) Council is responsible.

1. SCOPE

This SAE Standard applies to self-propelled off-road work machines. Included are the following categories:

- Earthmoving
- Implements and Attachments
- Forestry
- Road Building and Maintenance
- Specialized Mining
- Powered Industrial Trucks

This SAE Standard does not apply to Agricultural Tractors as defined in ANSI/SAE S390 although some SAE standards are also applicable to Agricultural Tractors.

NOTE: Most standards relating to agricultural tractors and implements are developed by ASABE.

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1.1 Purpose

This document establishes categories of self-propelled off-road work machines and their implements and attachments for standards development work within the SAE ConAg Council. See Table 1.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J990 Nomenclature - Agricultural and Industrial Mowers

SAE J1209 Identification Terminology of Mobile Forestry Machines

2.1.2 ASABE Publication

Available from ASABE, 2950 Niles Road, St. Joseph, MI 49085-9659. Tel: 269-428-6324, www.asabe.org.

ANSI/ASAE S390 Definitions and Classifications of Agricultural Field Equipment

2.1.3 ISO Publication

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ISO 6165 Earthmoving machinery - Basic types – Identification and terms and definitions

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TABLE 1 - OFF-ROAD WORK MACHINES

Earthmoving	Implements and Attachments	Forestry ⁽³⁾	Road Building and Maintenance	Specialized Mining	Powered Industrial Trucks (For reference only. Powered industrial trucks are covered by standards developed by the Industrial Truck Standards Development Foundation and are not covered by SAE standards.)
Loaders ⁽¹⁾⁽²⁾	Flail Mowers	Forwarders	Cold Planers	Continuous Miners	Fork Lift Trucks
Backhoe-Loaders ⁽²⁾	Rotary Mowers	Fellers	Material Transfer Machines	Face Drills	Platform Trucks
Graders ⁽²⁾	Power Rakes	Self-Propelled Log Loaders		Roof Drills	Motorized Hand Trucks
Tractor-Scrapers ⁽²⁾	Backhoe Attachments	Feller-Bunchers	Pavers	Loading Machines	Motorized Hand/Rider Trucks
Dumpers ⁽²⁾	Sweeper Attachments	Harvesters	Road Wideners	Cutting Machines	Narrow Aisle Trucks
Trenchers ⁽²⁾		Processors	Self-propelled Sweepers	Rubber Tired Haulage Vehicles	Order Picker High Lift Trucks
Horizontal Earth Boring		Mobile Yarders	Soil Stabilizers	Locomotives	Pallet Trucks
Rollers and Compactors ⁽¹⁾⁽²⁾		Trailer-Mounted Log Loaders; Forestry Excavators; Skidders (tracked and wheeled – cable, grapple and clam bunk); Forestry Winches;	Reclaimers	Personnel Carriers	Reach Trucks
Pipelayers ⁽²⁾			Rollers and Compactors, Asphalt ⁽¹⁾⁽²⁾	Trucks	Side Loader Trucks
Rubber Tired Haulage Machines			Trimmers	Mechanics	Straddle Trucks
Excavators			Placers	Rock Dusting Machines	Rough Terrain Forklift Trucks
Tractors ⁽¹⁾⁽²⁾			Texture and Cure Machines	Blast-hole Drills;	Aircraft Towing Tractors
			Cylinder Finishers		Baggage Towing Tractors
			Resurfacing Machines		Vehicle Mounted Forklift Trucks

Table 1 provides categories and examples of machines in each category. 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, and may have different provisions for optional attachments.
2. For machine identification terminology, see ISO 6165.
3. For machine identification terminology, see SAE J1209.

3. OFF-ROAD WORK MACHINES - EARTHMOVING

3.1 Scope

This category applies to off-road work used for moving earth and other material on projects such as roads, dams, open pit excavation, quarries, trenching, recycling, landscaping and building sites. Included are machines listed in Table 1.

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

Refer to ISO 6165 for identification terminology.

3.2 Purpose

This category 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 category applies to implements and attachments that 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 machines listed in Table 1.

Refer to SAE J990 for nomenclature information for agricultural and industrial mowers.

4.2 Purpose

This category 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 - FORESTRY

5.1 Scope

This category applies to machines that are used in the harvesting, transporting, processing, plant, and site preparation for growing wood and wood fiber. Included are machines listed in Table 1.

Refer to SAE J1209 for Identification Terminology.

5.2 Purpose

This category provides identification terminology for forestry machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

6. OFF-ROAD WORK MACHINES - ROAD BUILDING AND MAINTENANCE

6.1 Scope

This category applies to machines that are used for constructing and maintaining highways, roads and streets. Included are machines listed in Table 1.

6.2 Purpose

This category provides identification terminology for road building and maintenance machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

7. OFF-ROAD WORK MACHINES - SPECIALIZED MINING

7.1 Scope

This category applies to machines that are used in mining, excavation, and tunneling operations for the excavation, transportation, and handling of earth, ores, coal and other mineral substances. Included are machines listed in Table 1.

7.2 Purpose

This category provides identification terminology for specialized mining machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.