



400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

# SPECIALIZED VEHICLE PRACTICE

SAE J1116

Issued July, 1975  
Revised June, 1986

Supersedes J1116 JUN85

Submitted for recognition as an American National Standard

## CATEGORIES OF OFF-ROAD SELF-PROPELLED WORK MACHINES

**PURPOSE:** This recommended practice establishes categories of off-road self-propelled work machines. Where possible, this recommended practice shows which standards writing organization - SAE or other - will be responsible for each category for machine identification terminology, component nomenclature, definitions of specification terms, and other standards and recommended practices.

**SCOPE:** This recommended practice applies to machines that are in regular commercial production. Included are the following categories:

- Construction
- General Purpose Industrial
- Agricultural
- Forestry
- Specialized Mining Machinery
- Powered Industrial Trucks

In spite of the appearance of the same names, such as tractors and loaders in more than one category, further development of this and related recommended practices 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.

SAE Technical Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

## 1. SELF-PROPELLED CONSTRUCTION MACHINES

**Purpose:** This recommended practice establishes categories of self-propelled construction machines.

**Scope:** This recommended practice applies to machines that are in regular commercial production. Construction machines are divided into two classes - Earthmoving and Other Than Earthmoving.

### 1.1 SELF-PROPELLED CONSTRUCTION MACHINES - EARTHMOVING

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

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

- Tractors
- Loaders
- Dumpers
- Tractor-Scrapers
- Excavators
- Continuous Diggers
- Graders
- Augers
- Backhoe Loaders

Not included are machines intended for use on improved surfaces such as in-plant material handling, highway, water, air transport, or for agricultural purposes.

Refer to SAE J1057 for identification terminology.

**Note:** Above named machines are listed as examples. The lists are not intended to include all machines in current production.

### 1.2 SELF-PROPELLED CONSTRUCTION MACHINES - OTHER THAN EARTHMOVING

**Purpose:** This recommended practice provides identification terminology for construction machines other than earthmoving. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

**Scope:** This recommended practice applies to machines that are in regular commercial production. They are intended for use on unimproved surfaces. They are used on projects such as roads, dams, and building sites. Included are such machines as:

Cranes  
 Pavers  
 Soil Stabilizers  
 Rollers/Compactors  
 Pipelayers

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

## 2. SELF-PROPELLED GENERAL PURPOSE INDUSTRIAL MACHINES

Purpose: This recommended practice provides identification terminology for general purpose industrial off-road machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

Scope: This recommended practice applies to machines that are in regular commercial production and are over 20<sup>1</sup> hp. They are used for landscaping, construction site services, public and commercial grounds keeping, and highway right-of-way maintenance. Included are such machines as:

Tractors  
 Loaders  
 Backhoe Loaders  
 Mowers  
 Trenchers

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

## 3. SELF-PROPELLED AGRICULTURAL MACHINES

Purpose: This recommended practice establishes the category for powered agricultural equipment. Self-propelled machines are listed for reference only. They are covered by ASAE. Only agricultural tractors<sup>2</sup> are covered by standards developed by SAE.

Scope: This recommended practice applies to machines that are in regular commercial production. They are designed primarily for use in agricultural operations for the production of food and fiber.

Agricultural Tractors  
 Combines<sup>3</sup>  
 Cotton Pickers<sup>3</sup>  
 High Clearance Sprayers<sup>3</sup>  
 Forage Harvesters<sup>3</sup>  
 Beet Harvesters<sup>3</sup>  
 Balers<sup>3</sup>

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

<sup>1</sup>To be further defined at a later date.

<sup>2</sup>For terminology of agricultural equipment see SAE J1150.

<sup>3</sup>Refer to ASAE for definition and terminology.

#### 4. SELF-PROPELLED FORESTRY MACHINES

**Purpose:** This recommended practice provides identification terminology for general forestry machines. Identification is determined by the end-point usage intended by the manufacturer's design objectives.

**Scope:** This recommended practice 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
- Forwarder
  - Fellers
    - Feller Buncher
    - Feller Skidder
    - Feller Forwarder
  - Slasher
  - Chipper
  - Self-Propelled Log Loaders
  - Debarkers
  - Delimber
- Tree Harvesters
  - Feller-Delimber
  - Feller-Delimber-Buncher
  - Feller-Delimber-Slasher-Buncher
- Tree Processor
  - Delimber Slasher
  - Delimber Buncher
  - Slasher Buncher
  - Delimber-Slasher-Buncher

Refer to SAE J1209 for Identification Terminology.

**Note:** Above named machines are listed as examples. The lists are not intended to include all machines in current production.

#### 5. SELF-PROPELLED SPECIALIZED MINING MACHINERY

**Purpose:** This recommended practice establishes the category self-propelled specialized mining machinery. Identification terminology and other standards pertaining specifically to these machines are developed and published by SAE and.<sup>4</sup>

<sup>4</sup>To be determined later.

Scope: This recommended practice applies to machines that are in regular commercial production. These machines and support vehicles are used in mining excavation, and tunneling operations for the excavation, transportation, and handling of earth, ores, coal, and other mineral substances. Included are such machines as:

Continuous Miners  
Face Drills  
Roof Drills  
Loading Machines  
Cutting Machines  
Rubber Tired Haulage Vehicles  
Locomotives  
Personnel Carriers  
Mechanics Trucks  
Rock Dusting Machines

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

#### 6. POWERED INDUSTRIAL TRUCKS

Purpose: This recommended practice establishes the category powered industrial trucks for reference only. Powered industrial trucks are covered by standards developed by the American Society of Mechanical Engineers B56 Committee.

Scope: This recommended practice applies to machines that are in regular commercial production. They are used for transporting, storing, and retrieving material and goods in industry and commerce associated with manufacturing, warehousing, processing, and retail sales facilities. Included are such machines as:

Fork Lift Trucks  
Platform Trucks  
Motorized Hand Trucks  
Motorized Hand/Rider Trucks  
Narrow Aisle Trucks  
Order Picker High Lift Trucks  
Pallet Trucks  
Reach Trucks  
Side Loader Trucks  
Straddle Trucks  
Rough Terrain Fork Lift  
Aircraft Towing Tractors  
Baggage Towing Tractors

Also included are loaders and tractors from Categories 1 and 2 which have been modified (by the manufacturer) by addition of a mast or boom for the purpose of using forks. Their lifting capacity is to be determined as a rough terrain fork lift (ASME B56.6).

Loaders from Categories 1 and 2 where the bucket has been replaced by a fork attachment are not included.

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

φ OFF-ROAD SELF-PROPELLED WORK MACHINES

1. Construction		2. General Purpose Industrial	3. Agricultural	4. Forestry	5. Specialized Mining Machinery	6. Powered Industrial Trucks (For reference only. Powered industrial trucks are covered by standards developed by the American Society of Mechanical Engineers.)
1.1 Earthmoving	1.2 Other than Earthmoving					
Tractors (1) (4) Loaders (1) (4) Backhoe Loaders (1) (4) Graders (4) Tractor-Scrapers (4) Dumpers (4) Excavators (4) Continuous Diggers (4) Augers (4)	Cranes Pavers Soil Stabilizers Rollers and Compactors Pipelayers	Tractors (1) Loaders (1) Backhoe Loaders (1) Mowers Trenchers	Agricultural Tractors (All other agricultural implements and self-propelled machines are covered by standards developed by ASAE. Examples of such machines include combines, cotton pickers, hi-clearance sprayers, forage harvesters, beet harvesters, balers, etc.)	Skidders Forwarders Fellers Self-Propelled Log Loaders Debarbers Delimbers Chippers Slashers Mobile Yards Feller-Bunchers Feller-Forwarders Processors Harvesters	Continuous Miners Face Drills Roof Drills Cutting Machines Loading Machines Rubber Tired Haulage Vehicles Locomotives Personnel Carriers Mechanics Trucks Rock Dusting Machines	Fork Lift Trucks Platform Trucks Motorized Hand Trucks Motorized Hand/Rider Trucks Narrow Aisle Trucks Order Picker High Lift Trucks Pallet Trucks Reach Trucks Side Loader Trucks Straddle Trucks Rough Terrain Fork Lift Trucks Aircraft Towing Tractors Baggage Towing Tractors

NOTE: Above 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) Further descriptions of agricultural tractors will be developed jointly by SAE and ASAE.

(3) Further descriptions of these machines will be developed by ASAE.

(4) For machine identification terminology see SAE J1057.

(5) For terminology of agricultural equipment see SAE J1150.

J1116 JUN86RATIONALE:

Not applicable.

RELATIONSHIP OF SAE STANDARD TO ISO STANDARD:

Not applicable.

REFERENCE SECTION:

SAE J1057, Identification Terminology of Earthmoving Machines

SAE J1150, Terminology for Agricultural Equipment

SAE J1209, Identification Terminology of Mobile Forestry Machines

APPLICATION:

This recommended practice establishes categories of off-road self-propelled work machines. Where possible, this recommended practice shows which standards writing organization - SAE or other - will be responsible for each category for machine identification terminology, component nomenclature, definitions of specification terms, and other standards and recommended practices.

COMMITTEE COMPOSITION:DEVELOPED BY SAE SUBCOMMITTEE 13 - TERMINOLOGY AND DEFINITIONS:

G. H. Ritterbusch, Caterpillar Tractor Co., Peoria, IL - Chairman  
 G. L. Ball, Ford Motor Corp., Troy, MI  
 L. W. G. Collins, Deere & Co., Dubuque, IA  
 L. L. Lemke, Cecil, WI  
 B. Massaroni, Dept. of the Army, Ft. Belvoir, VA  
 J. D. Schell, Clark Equip. Co., Battle Creek, MI  
 P. J. Sperry, Dubuque, IA

SPONSORED BY THE SAE OFF-ROAD MACHINERY TECHNICAL COMMITTEE:

W. L. Black, Clark Michigan Co., Buchanan, MI - Chairman  
 G. C. Randall, Ford Motor Co., Troy, MI  
 G. R. Bailey, Bailey Marketing Inc., Crystal Lake, IL  
 W. F. Busbey, Caterpillar Tractor Co., Decatur, IL  
 D. G. Castine, Trojan Industries, Inc., Batavia, NY  
 J. B. Codlin, Springfield, IL  
 C. T. Crawshaw, Aurora, IL  
 W. L. Daniels Sr., B. F. Goodrich Co., Bloomington, IN  
 D. W. Driscoll, Cummins Eng. Co., Inc., Columbus, IN  
 G. W. Dudley, Caterpillar Tractor Co., Peoria, IL