SURFACE VEHICLE STANDARD

J2130™-2 JUN2021

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Superseding J2130-2 MAR2015

Identification of Self-Propelled Sweepers and Cleaning Equipment Part 2 - Machines with a Gross Vehicle Mass up to 5000 kg

RATIONALE

SAE J2130-2 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Standard applies to all self-propelled machines with a gross vehicle mass up to 5000 kg that are utilized to clean material from outside paved areas, parkland, floors in non-residential buildings and areas principally exposed to pedestrian traffic. Primary methods for material removal can be by mechanical, pneumatic, washing and flushing systems, or in a combination of any system.

1.1 Purpose

To identify self-propelled cleaning equipment which are grouped into Self-propelled Sweepers classified under the Road Building and Maintenance machine category of SAE J1116.

2. REFERENCES

2.1 Applicable Document

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

2.1.1 SAE Publication

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 J1116 Categories of Off-Road Self-Propelled Work Machines

3. DEFINITIONS

3.1 COMPACT/SUB-COMPACT SWEEPERS

Self-propelled machines primarily designed to sweep material from outside paved areas. These machines can move material to a hopper or other type of container attached to the machine by mechanical or pneumatic means or by a combination of both.

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https://www.sae.org/standards/content/J2130/2_202106

3.2 INDUSTRIAL SWEEPERS

Self-propelled ride-on or pedestrian operator controlled machines used to clean-up material inside industrial and non-residential buildings. These machines can employ mechanical or pneumatic means or a combination of both means.

3.3 INDUSTRIAL SCRUBBERS

Self-propelled ride-on or pedestrian operator controlled machines that use a washing system to remove material. The washing system consists of a tank of cleaning solution, a method for applying the cleaning solution to the surface, and a collection system to recover the cleaning solution. The machine can be equipped with or without scrubbing attachments.

3.4 SPECIALTY CLEANERS

Self-propelled machines equipped to perform specific cleaning task. This could relate to the surface being cleaned or any other unique feature of the cleaning operation.

4. IDENTIFICATION

4.1 Compact and sub-compact sweepers with integral chassis construction and maximum speed of 50 km/h or less. These machines are principally utilized outside to clean roadways, general parking areas, areas exposed to pedestrian traffic and other paved surfaces where accessibility can be restricted. They can have their maximum speed limited by virtue of design, legislation or within the operational environment (Figure 1).

4.1.1 Hoppers can be high dump (being able to dump into refuse containers) or low dump (being able to dump onto the ground only).

4.1.2 Material can be conveyed into the hopper via mechanical or pneumatic means or by a combination of both.

4.2 Industrial sweepers with speeds of less than 25 km/h for rider operated machines and less than 6 km/h for walk-behind pedestrian machines. These machines are principally utilized to clean inside buildings, general parking areas, areas principally exposed to pedestrian traffic and other off-highway applications. (Figure 2).

4.2.1 Hoppers can be high dump (being able to dump into refuse container) or low dump (being able to dump on the ground only).

4.2.2 Steering controls can be located in the center of the operator's cabin, on the left side or on the right side of the operator's cabin, or on both sides of the operator's cabin (rider machines only).

4.2.3 Material can be conveyed in to the hopper via mechanical or pneumatic means or by a combination of both.

4.3 Industrial scrubbers with speeds of less than 25 km/h for rider operated machines and less than 6 km/h for walk-behind pedestrian machines. These machines principally utilized to clean inside buildings, general parking areas, areas principally exposed to pedestrian traffic and other off-highway applications. (Figure 3).

4.3.1 Steering controls can be located in the center of the operator's cabin, on the left side or on the right side of the operator's cabin, or both sides of the operator's cabin.

4.3.2 Cleaning solution can be fed to the floor or surface through gravity or a pressurized system.

4.3.3 Cleaning solution can be heated or unheated.

4.3.4 Spent cleaning solution can be recovered from the floor surface by a mechanical or pneumatic means.

4.4 Specialty cleaners are self-propelled machines equipped to perform a specific cleaning task. This designation could relate to the surface being cleaned or any other unique feature of the cleaning operation.

4.5 Figures 4a, 4b and 4c show typical examples of these machines (which are not limited to only those shown), but would be based on the principles elaborated in paragraphs 4.1, 4.2 and 4.3. They are designed and constructed to fulfill a particular cleaning requirement. Additional systems, either solely or in combinations, employing filtration, high pressure water jetting, flushing, detergents, scrubbing, spoil retrieval and recirculation, may be utilized to perform the function.

4.6 Hoppers can be high dump (being able to dump into refuse containers), low dump (being able to dump on the ground only) or loading into bags or similar receptacles.

4.7 Spoil discharge from recovery tanks can be facilitated by loading into containers, drums or similar receptacles.

5. COMPONENT IDENTIFICATION (additional definitions not shown in figures)

5.1 The wander hose or vacuum hose is a secondary suction inlet used by the operator to transport debris into the hopper through a remote hose connection.

5.2 The wander hose has an arm that assists in carrying the wander hose.

5.3 The fan is used to move air either to create a vacuum to control dust or transfer debris from the surface being cleaned into the hopper. Additionally, the fan can also be utilized in a dust control system.

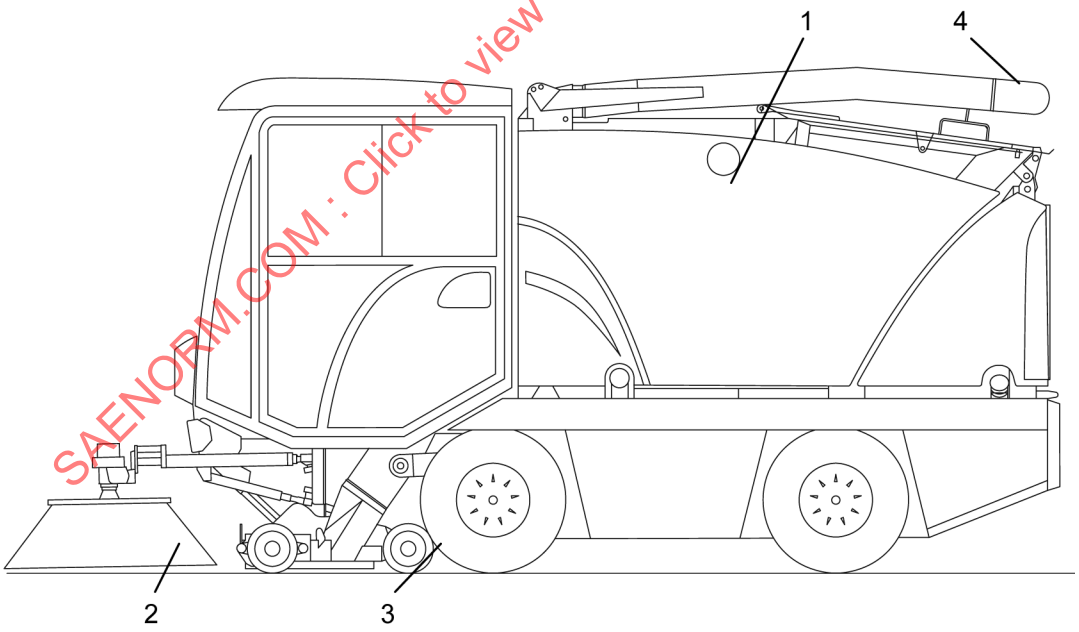

Figure 1A - Compact sweeper

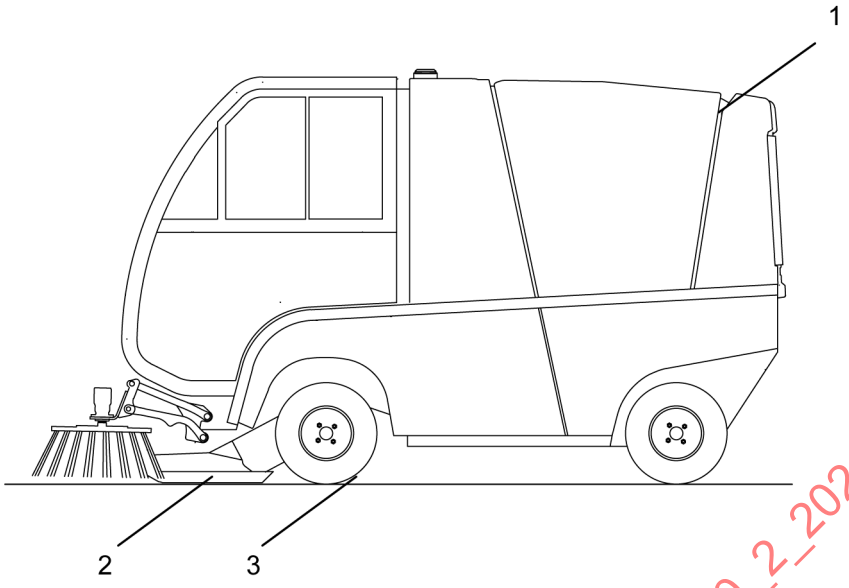

Figure 1B - Sub- compact sweeper

1. Hopper
2. Gutter or Side Broom
3. Pick-up Nozzle
4. Wander Hose

Figure 1 - Self-propelled compact sweepers

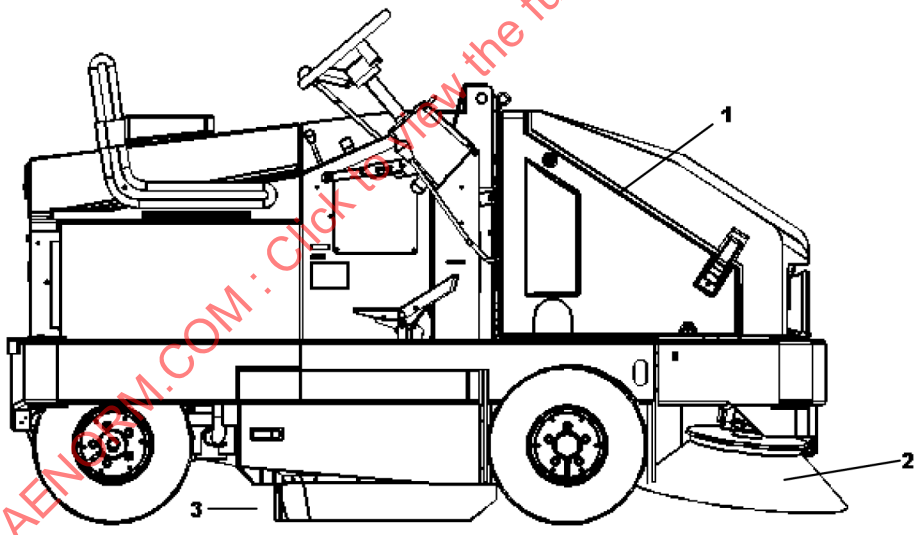

Figure 2A - Direct throw rider industrial sweeper

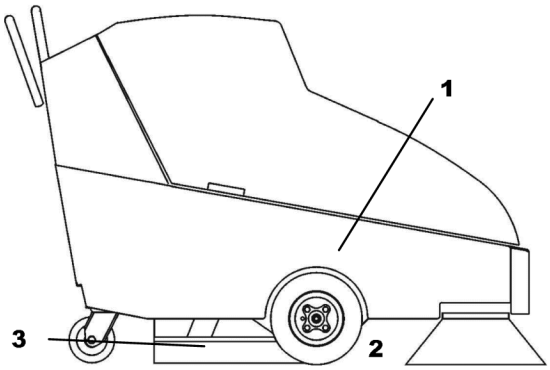

Figure 2B - Direct throw walk-behind industrial sweeper

1. Hopper
2. Side Sweeping Broom
3. Main Sweeping Broom

Figure 2 - SELF-PROPELLED INDUSTRIAL SWEEPERS

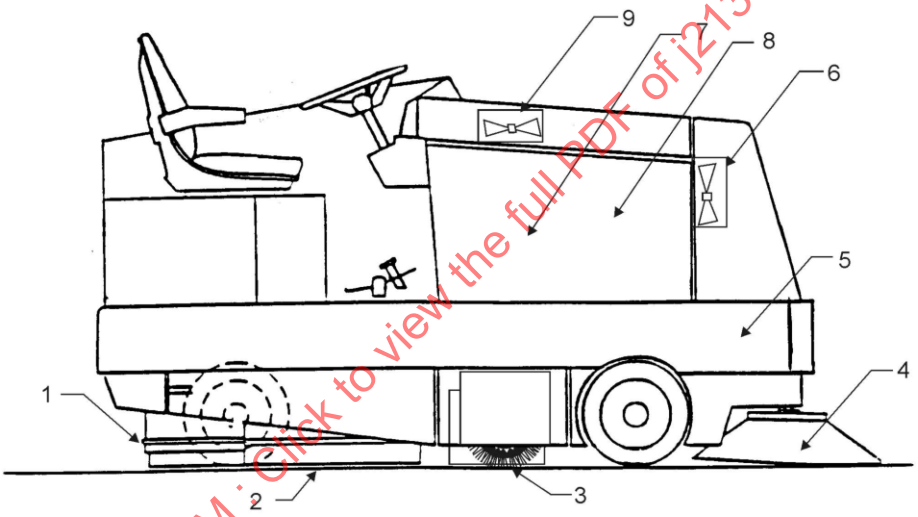

Figure 3A - Industrial rider sweeper/scrubber combination

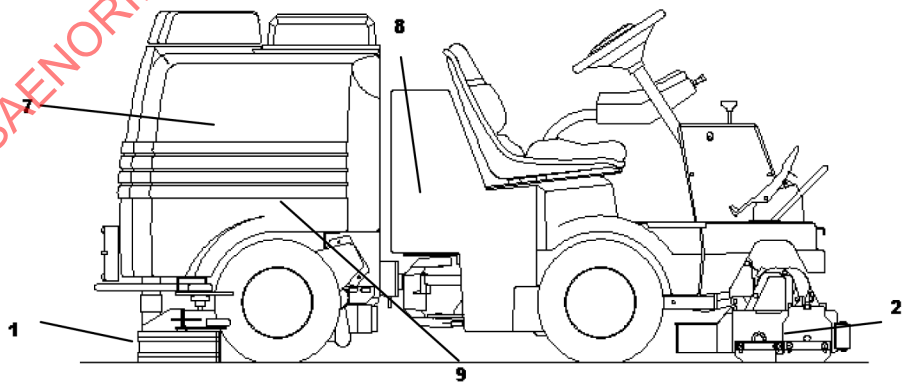

Figure 3B - Articulated industrial rider scrubber