



SURFACE VEHICLE STANDARD

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Self-Propelled Sweepers
Sweep-Ability Performance

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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Documents

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1. SCOPE

This SAE Standard establishes a method of disclosing the sweep-ability performance of self-propelled sweepers that use broom means for sweeping and collection, together with either a mechanical- or pneumatic-conveyance system for the transfer of “sweepings” into a collection hopper.

1.1 Purpose

The purpose of this document sets out to describe a test practice for gauging the sweep-ability performance by sweepers described in SAE J2130-1 together with a format for the presentation of the test results. The document can be used to disclose or compare particular operating performance criteria for similar conditions.

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 J2130-1 Identification of Self-Propelled Sweepers and Cleaning Equipment Part 1 – Machines with a Gross Vehicle Mass greater than 5000 kg

3. DEFINITIONS

3.1 SWEEPER

A self-propelled sweeper is primarily designed to sweep material from highways, parking lots, airport complexes, industrial and construction sites, and during road maintenance work. The sweeper may use broom means to dislodge and direct material into a collection mechanism, which may be mechanical, pneumatic, or a combination of both systems to convey the swept material into a collection hopper.

3.2 TEST SITE

Level paved area ($\pm 3\%$) on which the sweeping test is conducted.

3.3 TEST MATERIAL

Prepared materials used in the sweeping tests.

4. TECHNICAL REQUIREMENTS

4.1 Test Method

There are three separate tests - using an assortment of consistent test materials for each test.

4.2 Condition of Sweeper

Prior to a test, the sweeper shall be set at the normal operational settings according to the manufacturer's specification. Brooms and swept material containment curtains, etc., should be in like-new condition. Where the sweeper has variable duties of operation described in its instruction manual, then the sweeper shall be operated at its maximum-duty cycle. These settings shall be stated in the test report. Dust suppression systems if provided shall be active during the test.

4.3 Weather Conditions

Weather conditions shall be dry, with a wind speed less than 20 km/h and such that it does not disturb objects on the test course as depicted in test 3.

4.4 Test Site

4.4.1 Site

During the test run, the sweeping brooms (channel(s) or gutter broom(s)) shall be directed along the guideline depicted in the test site pattern in 4.4.3.

4.4.2 Site Preparation

The position and pattern of the test material placement zones is shown in the test site pattern in 4.4.3. If the type and sweeping width of the sweeper being assessed lacks sufficient capacity, then the zone size and materials can be varied, in which case full descriptions should be recorded with description of the criteria recorded in the test report.

4.4.3 Test Site Pattern

See Figure 1.