



SURFACE VEHICLE STANDARD	J2118™	AUG2024
	Issued 1994-02 Revised 2006-01 Reaffirmed 2024-08	
	Superseding J2118 OCT2018	
Braking Performance - Asphalt Pavers		

RATIONALE

SAE J2118 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. Scope

This SAE Standard specifies brake system performance and test criteria to enable uniform evaluation of the braking capability of self-propelled, rubber-tired and tracked asphalt pavers. Service, secondary, and parking brakes are included.

1.1 Application

This document applies to self-propelled, rubber-tired and tracked asphalt pavers as defined in 3.1 and to these same machines while in service.

1.2 Rationale

At the five-year review, a need was recognized to update SAE J2118 to increase the required brake system stopping and holding performance. It was also recognized that the scope of the document should be broadened to cover both rubber-tired and tracked asphalt pavers to provide one comprehensive document for these machines. In addition, some sections of the document have been revised and new sections added to improve the document by clarifying the use of hydrostatic drives as a service brake system and to make it consistent with other SAE braking documents.

2. References

2.1 Applicable Publication

The following publication forms a part of this specification to the extent specified herein.

2.1.1 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 9248—Earthmoving machinery—Units for dimensions, performance, and capacities and their measurement accuracies

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3. Definitions

3.1 Asphalt Paver

A self-propelled, rubber-tired or tracked construction machine specifically designed to receive, convey, distribute, profile, and compact paving material by the free-floating screed method.

3.2 Machine Mass

3.2.1 For stopping performance tests, the operating mass of the machine with the heaviest combination of screed (without any fixed screed extensions) and options approved by the manufacturer, with an operator of 75 kg, with the machine fully fueled and serviced, and with the hopper and feeder system empty.

3.2.2 For holding performance tests, the mass is the same as 3.2.1 except the machine hopper is to be filled with a volume of 1600 kg/m³ minimum density material equal to 67% of the hopper-struck capacity.

3.3 Brake Systems

All the components which combine together to stop and/or hold the machine. Such systems consist of the control(s), means of brake actuation, the brake(s), and all parts connecting the brake(s) to the tires or tracks.

3.3.1 SERVICE BRAKE SYSTEM

The primary system used for stopping and holding the machine.

3.3.2 SECONDARY BRAKE SYSTEM

The system used for stopping the machine in the event of any single failure in the service brake system.

3.3.3 PARKING BRAKE SYSTEM

The system used to hold a stopped machine in a stationary position.

3.4 Brake System Components

3.4.1 CONTROL

Component directly activated by the operator to cause a force to be transmitted to the brake(s).

3.4.2 BRAKE ACTUATION SYSTEM

All the components between the control(s) and the brake(s) which connect them functionally.

3.4.3 BRAKE

Component, which directly applies a force to oppose movement of the machine. Brakes, for example, may be friction, electrical, hydrostatic or other fluid types.

3.5 Common Component

A component that performs a function in two or more brake systems.

3.6 Back Throttling

The action of applying slight forward or reverse power to a hydrostatic machine to hold the machine stationary on a slope.

3.7 Stopping Distance

Distance traveled by the machine from the point on the test course at which the brake control actuation begins to the point on the test course where the machine is fully stopped.

4. General Brake System Requirements

4.1 Required Brake Systems

Machines shall be equipped with:

4.1.1 A service brake system.

4.1.2 A secondary brake system.

4.1.3 A parking brake system.

4.2 No brake system shall contain a disconnect such as a clutch or shiftable gearbox which allows disabling the brake(s) with the exception of 4.2.1 and 4.2.2 below.

4.2.1 A brake disconnect designed to allow movement of a disabled machine shall be able to be reapplied immediately or it must be in a location from which it can be operated from ground level.

4.2.2 A power-source disconnect designed for cold-weather starting which also disables the service or secondary brake system shall require application of the parking brake prior to disconnection.

4.3 Service Brake System

All machines shall meet the service brake performance requirements specified in 6.4.1 and 6.5.1.

4.3.1 If other systems are provided with power from the service brake system, any failure in these systems shall be considered the same as a failure in the service brake system.

4.4 Secondary Brake System

All machines shall meet the secondary brake performance requirements specified in 6.5.2.

4.5 Parking Brake System

All machines shall meet the parking brake performance requirements of 6.4.2.