



# SURFACE VEHICLE RECOMMENDED PRACTICE

J3078™/2

JAN2023

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Revised 2023-01

Superseding J3078/2 APR2021

(R) Off-Road Self-Propelled Work Machines Operator Enclosure Environment -  
Part 2: Air Filter Element Test Method

## RATIONALE

SAE J3078/2 is being revised because of the changes made to SAE J3078-4, which overlap with SAE J3078/2. Additional changes were also necessary to harmonize SAE J3078/2 with ISO 23875:2021 Amd 1.

This SAE filter test standard provides a standard test method, for general use filters.

Fractional efficiency testing determines the efficiency of the filter at specific particle sizes. This test method is used when quantifying particulate efficiency for filtration used in human respiratory environments, i.e., operator enclosures.

ISO 11155-1 is a fractional efficiency test method that addresses a wide variety of filter media types, filter shapes, efficiency requirements, and airflow ranges that are utilized in modern operator enclosures.

## FOREWORD

Tests were performed to determine a correlation between the test method previously used for general use, the ISO 5011 gravimetric test method (the testing method used by SAE J1533) and the ISO 11155-1 fractional efficiency test method. Filters with an efficiency  $\geq 96\%$ , under ISO 5011 using ISO 12103-1, A.2 (ISO fine) test dust, were tested under ISO 11155-1. They were found to be approximately 92 to 98% efficient on particles from 5.50 to 10  $\mu\text{m}$  in size.

## 1. SCOPE

SAE J3078/2 provides a test method to determine filter performance for fresh and recirculation air filters used in operator enclosures with an air ventilation system. SAE J3078/2 is not applicable for testing vapor and gas filters. The category of machines covered includes off-road self-propelled work machines as defined in SAE J1116 and tractors and machinery for agriculture and forestry as defined in ASABE standard ANSI/ASAE S390.

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