SURFACE VEHICLE RECOMMENDED PRACTICE

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Test Method for Measuring Power Consumption of Air Conditioning and Brake Compressors for Trucks and Buses

RATIONALE

This technical report is stabilized because it covers technology, products, or processes for which technical expertise no longer resides in the owning committee.

STABILIZED NOTICE

This document has been declared “STABILIZED” by SAE Truck and Bus Aerodynamics and Fuel Economy Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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1. Scope—The testing techniques outlined in this SAE Recommended Practice were developed as part of an overall program for testing and evaluating fuel consumption of heavy duty trucks and buses. The technique outlined in this document provides a general description of the type of equipment and facility which is necessary to determine the power consumption of these engine-driven components.

It is recommended that the specific operating conditions suggested throughout the test be carefully reviewed on the basis of actual data obtained on the specific vehicle operation.

If specific vehicle application is not known, see SAE J1343.

1.1 Purpose—The purpose of this document is to provide a recommended test procedure for establishing the power consumption of an air brake compressor or an air conditioning compressor. It is intended that this test procedure be used to determine compressor power consumption over a range of operating conditions, including both the loaded and unloaded modes. The resulting data is intended for use in the measure of probable vehicle fuel consumption under operating conditions.

2. Reference

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

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1343—Information Relating to Duty Cycles and Average Power Requirements of Truck and Bus Engine Accessories, Section 3, Air Brake Compressors and Section 5, Air Conditioning Compressor

3. Test Equipment and Instrumentation

3.1 A test stand capable of driving the compressor over the recommended range of operating rpm.