



AEROSPACE STANDARD	AS452	REV. B
	Issued 1956-12 Revised 1965-10 Noncurrent 1992-12 Reaf. Nonc. 2003-10 Stabilized 2014-10 Superseding AS452A	
Oxygen Mask Assembly, Demand and Pressure Breathing, Crew		

RATIONALE

The A-10 Committee concluded that the content of this document will not be updated in the future. Other Aerospace Standards have replaced the requirements cited in this document. Therefore, the Committee decided to stabilize this document in its current state.

STABILIZED NOTICE

This document has been declared "Stabilized" by the SAE A-10 Aircraft Oxygen Equipment 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. PURPOSE:

The purpose of this standard is to establish optimum standards for crew demand and pressure-breathing oxygen mask assemblies for use by crew members in civil aircraft.

2. SCOPE:

This standard covers both general type and quick-donning type mask assemblies in the following classes:

- a. Class A, oronasal, demand
- b. Class B, oronasal, pressure-demand
- c. Class C, full face, demand
- d. Class D, full face, pressure-demand

3. GENERAL REQUIREMENTS:

3.1 Performance:

The performance of the mask assembly shall be satisfactory when worn on the face, connected to a separately mounted or mask-mounted regulator of the appropriate type, demand or pressure demand. Demand masks and regulators are those designed for delivering to the user either pure (100%) oxygen or a mixture of oxygen and air, in any volume or at any rate of flow required by the natural respiration of the user. The demand equipment is suitable for routine use up to 35,000 ft cabin altitude and is intended to be suitable for emergency (few minutes) use up to 40,000 ft cabin altitude.

Pressure-demand masks and regulators function as demand or diluter demand equipment up to approximately 30,000 ft. Above this altitude the regulator delivers to the user oxygen under pressure varying with altitude, and is intended to be suitable for routine use up to 42,000 ft cabin altitude and emergency (few minutes) use up to 45,000 ft.

3.2 Oxygen Supply System:

The mask assemblies described herein are for dispensing gaseous oxygen from demand or pressure-demand breathing type oxygen regulators, including mask-mounted regulators.

The mask when connected with the appropriate type of regulator (demand or pressure demand) becomes an integral part of the oxygen system. Therefore, certain performance requirements in this standard stem from, or are established to assure compatibility with, the oxygen regulator requirements.

3.3 Components:

Each mask assembly shall consist of the following components where applicable:

- a. Facepiece
- b. Suspension device
- c. Valve or valves
- d. Supply tube assembly
- e. Microphone
- f. Miscellaneous additional accessories as required

3.4 Materials and Workmanship:

3.4.1 Materials: The materials used in the manufacture of mask assemblies shall not:

- a. Contaminate oxygen
- b. Be adversely affected by continuous contact with oxygen
- c. Contain or cause objectionable odors
- d. Be allergenic or irritating when in contact with the skin
- e. Be affected by ozone to a harmful extent
- f. Be less than flame resistant, by treatment or by selection. A flame resistant material is defined as one which will not support combustion to the point of propagating a flame, beyond safe limits, after the removal of the ignition source, in an atmosphere of air at ground level.

3.4.1.1 Finish: The finish of the facepiece and other components within the field of vision of the user shall be non-reflective.

3.4.2 Workmanship: Shall be consistent with accepted high grade aircraft equipment practice.