



AEROSPACE STANDARD

AS1214™**REV. C**

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Superseding AS1214B

Minimum Standards for Valve, High Pressure Oxygen,
Line Shut Off, Manually Operated

RATIONALE

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

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1. SCOPE:

This SAE Aerospace Standard (AS) covers all types of manually operated high pressure Oxygen line shut off valves utilizing either metallic or nonmetallic valve seats for use in general and commercial type aircraft.

1.1 Purpose:

The purpose of this document is to define general minimum standards for the design, fabrication, and test of manually operated, high pressure Oxygen line shut off valves.

2. REFERENCES:

SAE AS861	Minimum General Standards for Oxygen Systems
SAE ARP1176	Oxygen System and Component Cleaning and Packaging
SAE AS8010	Aviators Breathing Oxygen Purity Standard
RTCA/DO-160D	Environmental Conditions and Test Procedures for Airborne Equipment
A-A-59503	Oil Free Dry Nitrogen
CGA G-7.1	Grade D, Commodity Specification for Air
SAE AIR4071	Lubricants for Oxygen Use

3. REQUIREMENTS:

3.1 General Requirements:

The requirements of AS861 are applicable to valves made under this standard.

3.1.1 Construction:

1. Wrench Flats - The valve body shall have adequate wrench flats and be sturdy enough to withstand installation and removal from typical Oxygen systems.
2. Manual On-Off Control Mechanism (valve handle) - Color - The manual control mechanism shall be colored green to denote Oxygen use.
3. Locking Device - All valve parts which, if loosened or inadvertently removed would cause leakage or escape of Oxygen, shall be secured by a self-locking device or shall be safety wired.
4. Weight and Size - The weight and size of the valve shall be a minimum consistent with the performance requirements and within the limitations of sound design practices.
5. Mounting Provisions - The valve shall have provisions for mounting to aircraft structure as required by the purchaser, or aircraft manufacturer. The mounting provisions shall be of sufficient strength to withstand the vibration, torque and shock loads which are anticipated in service.
6. Materials - The requirements and recommendations of AS861 shall be considered in design of the valve. Valve seat(s), seals and other nonmetallic materials if used shall be analyzed so as to reduce the possibility of ignition hazards. Maximum working pressure and the environmental conditions anticipated shall be considered in the design. The amount of nonmetallic materials used should be held to an absolute minimum. It is preferred to have metal to metal valve seat(s) interfaces.
7. Protective Treatment - When materials are used in the construction of the valve that are subject to deterioration when exposed to climatic and environmental conditions likely to occur during service usage, they shall be protected against such deterioration in a manner that will in no way prevent compliance with the performance requirements of this specification. The use of any protective coating that will crack, chip, or scale with age or extremes of climatic and environmental conditions shall be avoided.