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AIRCRAFT GROUND AIR CONDITIONING SERVICE CONNECTION

1. SCOPE:

This SAE Aerospace Standard (AS) defines interface configurations for the ground air conditioning service connection on commercial transport aircraft. In addition, it defines the clearances required to accommodate the connection of ground air conditioning hose couplings. Two types of service connections are included. The Type A connection (Figure 1) is a slotted ring with integral locking pads and is comparable to the MS33562 connection. The Type B connection (Figure 2) is a flanged tube with external locking lugs (Figure 3). The Type B connection has the same interface dimensional requirements as the Type A connection.

1.1 Purpose:

The purpose of this document is to establish uniform interface configurations on commercial transport aircraft for the ground air conditioning (conditioned air) service connection. Consideration is also given to the durability, maintainability, and repairability of the connection.

2. REFERENCES:

2.1 The following documents should be considered to be a part of this standard to the extent specified within:

ARP4084 Standardization of Locations and Type of Aircraft Ground Service Connections

U.S. Military Standard, MS33562 (ASG) Connection, Aircraft Ground Air Conditioning, 8 Inch, Minimum Requirements

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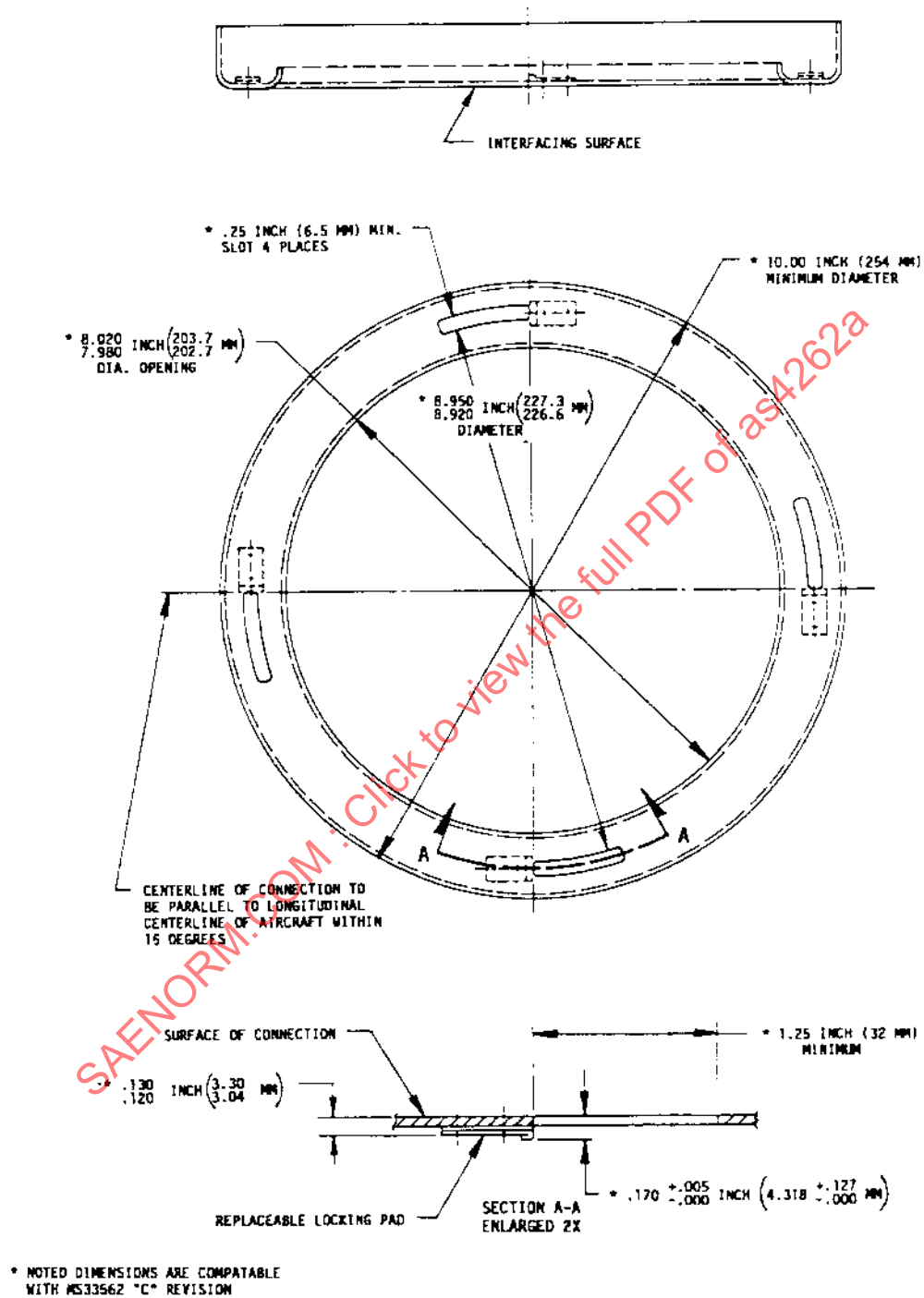


FIGURE 1 - Aircraft Connection - Type A

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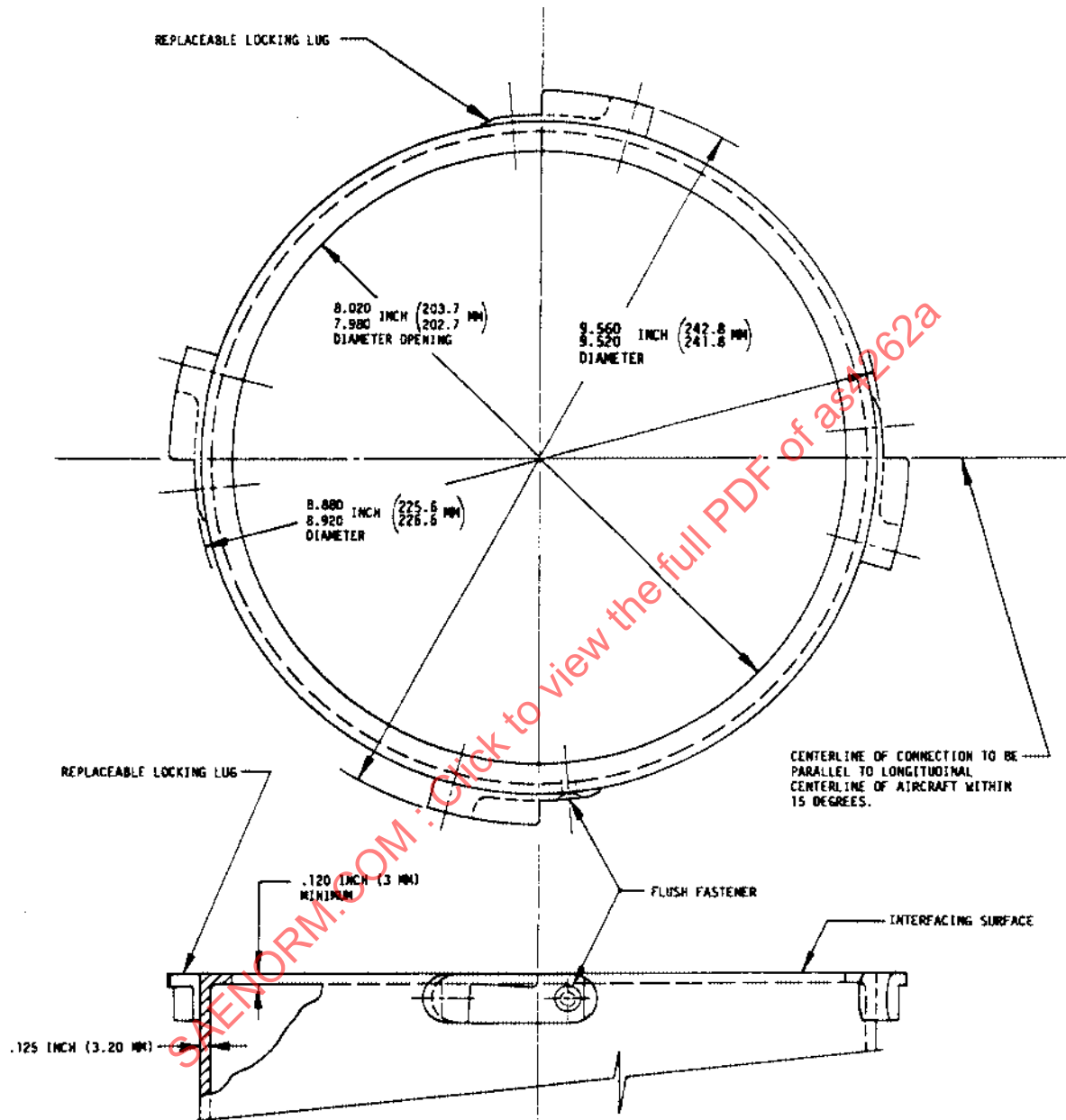


FIGURE 2 - Aircraft Connection - Type B

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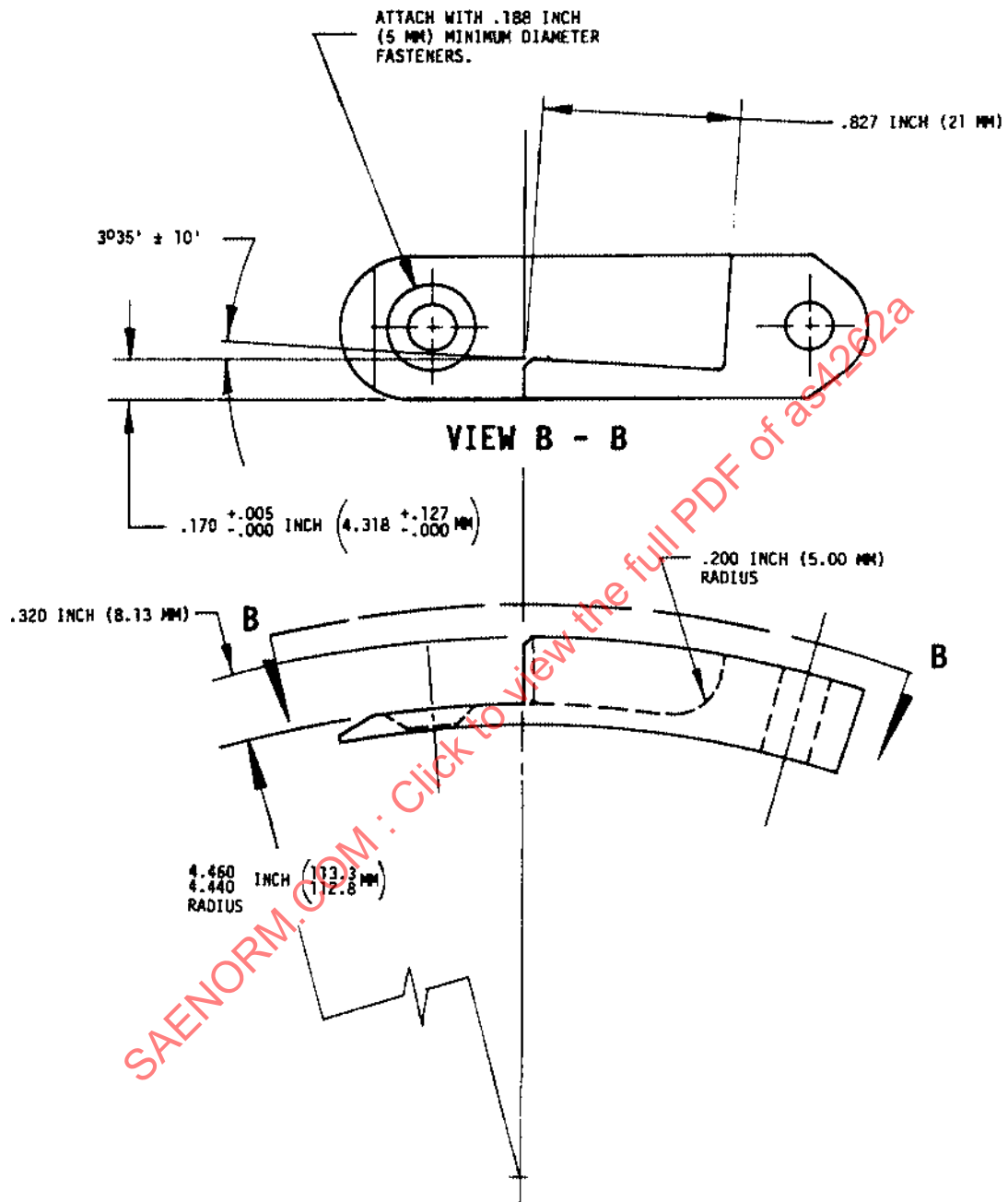


FIGURE 3 - Locking Lug

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2.2 Definitions:

For the purpose of this specification, the following terminology shall apply:

- 2.2.1 GROUND AIR CONDITIONING SERVICE CONNECTION: The fitting on the aircraft that accommodates the attachment of a conditioned air hose from an external supply source. It will hereafter be known as the service connection or connection.
- 2.2.2 GROUND AIR CONDITIONING SUPPLY HOSE COUPLING: The terminal fitting on the ground air conditioning supply hose. It will hereafter be known as the hose coupling or coupling.

3. EFFECTIVITY:

This document is applicable to new aircraft designs. Airlines are also encouraged to consider this standard when modifying or repairing existing aircraft configurations. The minimum essential criteria are identified by the use of the key word "shall". Recommended criteria are identified by the key word "should" and while not mandatory, are considered to be of primary importance in providing serviceable, economical, and practical ground air conditioning connections. Deviation from the recommended criteria should occur only after careful consideration, extensive testing, and thorough service evaluation have shown alternate methods to be satisfactory.

4. REQUIREMENTS:

4.1 Interface Configuration:

The interfacing surface and locking features of the aircraft service connection shall dimensionally comply with either Figures 1, or 2 and 3 of this specification.

The Type A flange permits use of slot filling coupler design. This combination offers a safe connection and prevents accidental coupler disconnects.

4.2 Hose Coupling Clearances:

Clearance requirements to accommodate ground equipment hose couplings that will interface with the air conditioning service connection specified herein are defined in Figure 4 of this specification.

4.3 Material:

The Type A connection shall be fabricated of high strength stainless steel sheet with a minimum thickness of 0.071 in (1.80 mm). The locking surface pads shall also be fabricated of stainless steel. The Type B connection shall be fabricated from high strength aluminum or stainless steel. The locking lugs for the Type B connection shall be fabricated from stainless steel and attached with two or more 0.188 in (5 mm) diameter fasteners.