The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

SAE AS1852 | REV. B

Issued 1984-12
Revised 1997-08

Superseding AS1852A

Submitted for recognition as an American National Standard

Nozzles and Ports - Gravity Fueling Interface Standard for Civil Aircraft

1. SCOPE:

This SAE Aerospace Standard (AS) defines the maximum allowable free opening dimensions for airframe fueling ports on civil aircraft that require the exclusive use of gasoline as an engine fuel and the minimum free opening dimensions for airframe fueling ports on civil aircraft that operate with turbine fuels as the primary fuel type.

In addition, this document defines the minimum fuel nozzle tip dimensions for turbine fuel ground service equipment and the maximum fuel nozzle tip diameter for gasoline ground service equipment.

1.1 Purpose:

This document establishes the essential interface dimensions for airframe fueling ports and ground fueling nozzles that are intended for use on civil aircraft with gravity fuel servicing provisions.

Primary intent of the standardized interface limits detailed in this document is the prevention of misfueling reciprocating engine powered aircraft with turbine fuel when exclusive use of gasoline is required for safe operation.

2. REFERENCES:

There are no referenced publications specified herein.

QUESTIONS REGARDING THIS DOCUMENT: (412) 772-8510 FAX: (412) 776-0243
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3. GENERAL STANDARDS:

3.1 Airframe Fueling Ports:

The following airframe fuel port dimensions represent standard limits. Use of ports with other dimensions that fall within prescribed limits are considered in compliance with the guidelines of this document.

TABLE 1 - Airframe Fueling Ports

Type of Fuel	Standardized Limitations	Fueling Port - Free Opening Metric Units (mm)	Fueling Port - Free Opening English Units (inch)
Gasolines	Maximum Opening Diameter	60	2.36
Turbine Fuels	Minimum Opening Diameter	75	2.95

3.2 Ground Fueling Nozzles:

The following ground fueling nozzle dimensions represent standard limits. Use of nozzles with dimensions that fall within the prescribed limits are considered to be in compliance with the guidelines of this document.

TABLE 2 - Ground Fueling Nozzles

Type of Service	Standardized Limitations	Fueling Nozzle Tip Dimensions Metric Units (mm)	Fueling Nozzle Tip Dimensions English Units (inch)
Gasolines	Maximum Nozzle Tip Diameter	50	1.97
Turbine Fuels	Minimum Nozzle Tip Length	67.6	2.66
Turbine Fuels	Maximum Nozzle Tip Width[1]	29.7	1.17

[1] Turbine fuel nozzles must adopt an elongated or elliptical tip cross section with maximum and minimum axes within dimensional limits noted above and in full conformance with the details of Figure 1.

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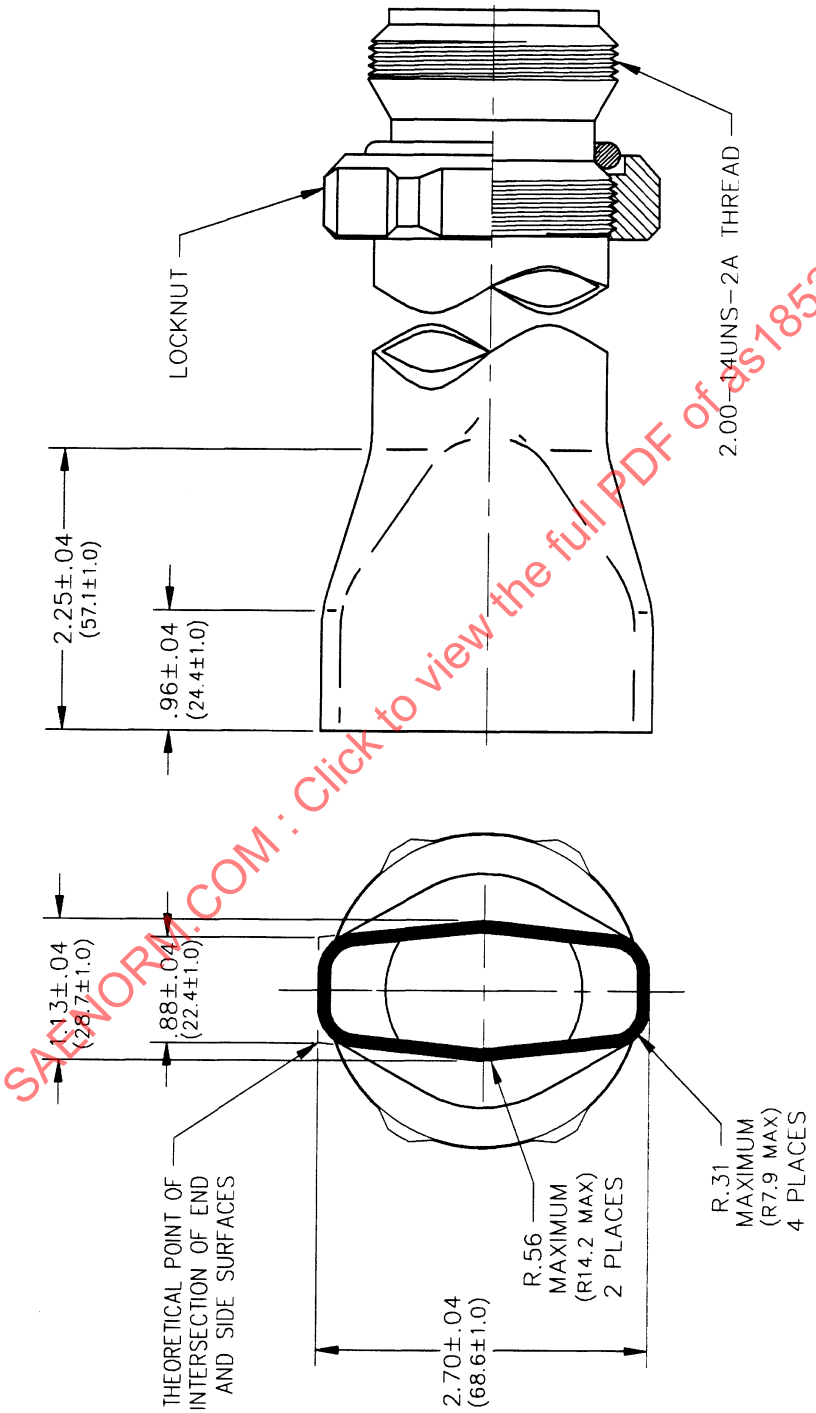

FIGURE 1 - Turbine Fuel Nozzle Tip

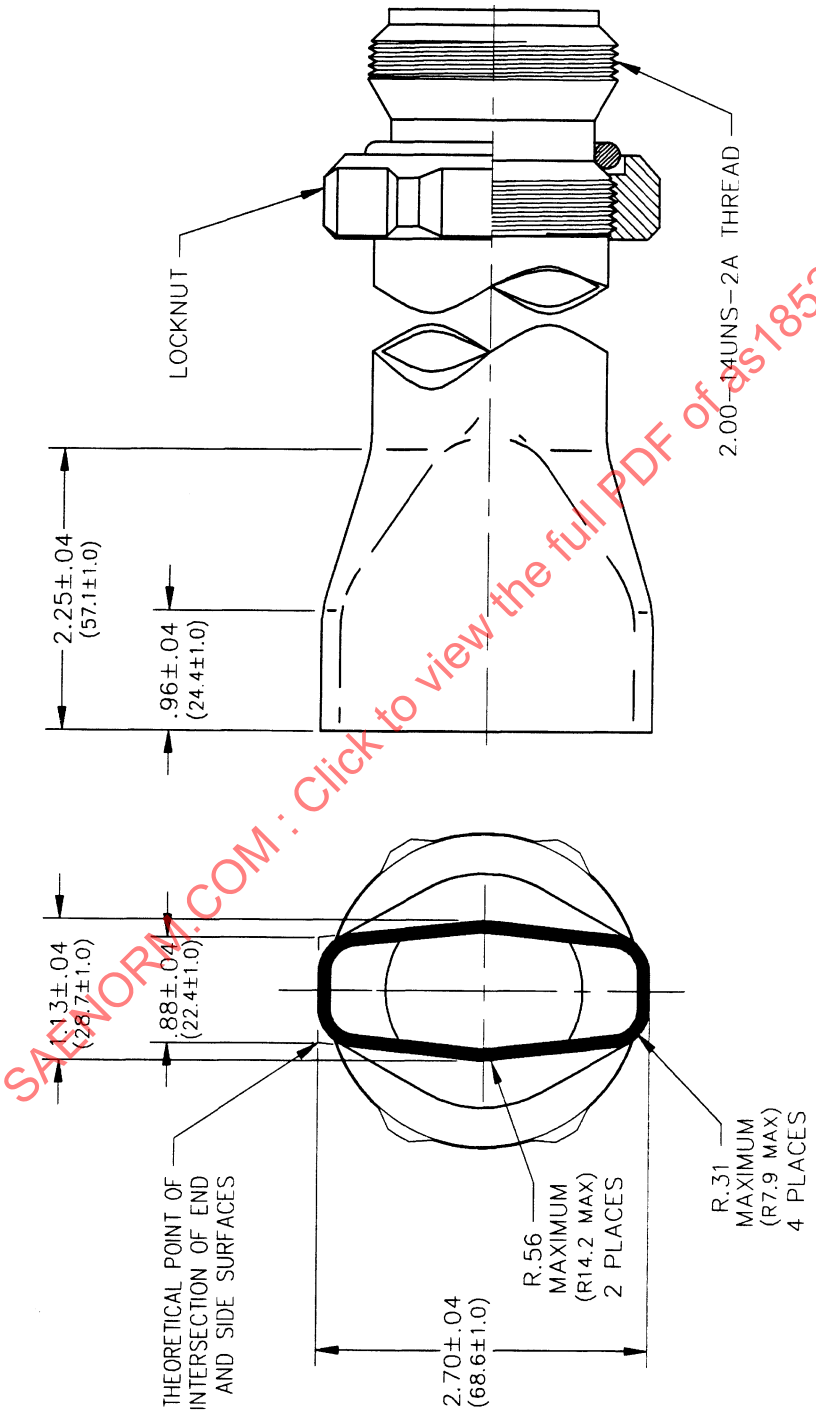

FIGURE 1 - Turbine Fuel Nozzle Tip