



AEROSPACE RECOMMENDED PRACTICE

ARP5298™

Issued 2003-11
Reaffirmed 2019-05

Aircraft Fueling Adapter Wear Limits

1. SCOPE:

This SAE Aerospace Recommended Practice (ARP) defines the wear limits allowed on certain features of Pressure Fuel Servicing Adapters which are crucial for safe interfacing of Pressure Fuel Servicing Nozzles and Pressure Caps. Wear limits as described herein represent the maximum amount of wear on certain features of the Adapter beyond which use of the Adapter for these purposes may contribute to an unsafe condition. Such wear is the result of the normal use of the Adapter for aircraft refueling and also, in some cases, for Nozzle stowage on refueling vehicles.

1.1 Purpose:

This document compiles inspection criteria to be applied to all Pressure Fuel Servicing Adapters in service. When aircraft Adapter wear goes unchecked, Pressure Caps may not seal properly. Of more concern, a Pressure Fuel Servicing Nozzle may be removed from a worn Adapter with the interlock features of the Nozzle defeated. The result of this condition can be the opening of the Nozzle when not attached to an Adapter and a potentially dangerous fuel spill.

1.2 Field of Application:

The criteria contained herein applies to Pressure Fuel Servicing Adapters that are:

- a. Affixed to aircraft for refueling and de-fueling purposes,
- b. Affixed to fixed fuel transfer stands utilized for fuel delivery and/or recirculation,
- c. Affixed to refueling vehicles utilized as bottom loading points or,
- d. Affixed to refueling vehicles utilized as secure Nozzle stowage fixtures.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2019 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER:
Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
<http://www.sae.org>

SAE WEB ADDRESS:

Full document details: [SAE ARP5298](#)

SAE values your input. To provide feedback on this Technical Report, please visit <http://standards.sae.org/ARP5298>

Documents
Document Sharing Hub

2. APPLICABLE DOCUMENTS:

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications:

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

AS5877 Detailed Specification for Aircraft Pressure Refueling Nozzle

2.2 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MS24484 Adapter, Pressure Fuel Servicing, Nominal 2.5 Inch Diameter

MIL-C-8605 Cap, Pressure Fuel Servicing

3. INTERFACE FEATURES SUBJECT TO WEAR:

Refueling Nozzles and Pressure Caps lock onto aircraft Adapters and seal by contacting upon or against certain surfaces and features of the Adapter, not limited or restricted to the inner sealing face, the three lugs protruding from the outside diameter of the most outboard end of the Adapter, and the three square slots in the outboard face. The lugs are equally spaced and are clocked opposite of the three slots which are also equally spaced. Refer to MS24484 for specifics of design. Wear of these features is a function of time and the number of connection cycles to which the Adapter is subjected. Specifically, (1) the width of the inner walls of each slot, (2) the width of the exterior surfaces of each lug, (3) thickness of the exterior surfaces of each lug, and (4) the distance from the inboard (underside) lug surfaces to the inner sealing surface are features subject to wear that will affect the safety of Nozzle and Pressure Cap performance.