AEROSPACE STANDARD

AS6286™/6	REV. A
Issued 2016-12 Cancelled 2019-11 Superseded by AS6286A	

Deicing/Anti-Icing Diagrams/No Spray Zones

RATIONALE

SAE G-12T, Training and Quality Programs Committee recommends AS6286/1 to AS6286/6 be cancelled since the requirements in this AS have been superseded by and re-introduced into Aerospace Standard AS6286 “Training and Qualification Program for Deicing/Anti-icing of Aircraft on the Ground” (which now includes the six corresponding Slash Sheets). All of these documents address training for aircraft ground de/anti-icing. AS6286 was developed as a global standard and the slash sheets caused confusion in some areas . As a result, all the appropriate requirements in AS6286 Slash Sheets 1 to 6 have been carried over to the new AS (i.e., there are no aspects of the slash sheets that are not covered by the superseding AS). As such, AS6286/1 to AS6286/6 should be cancelled and considered for “Archival Use Only”. This proposal to cancel SAE AS6286/1 to AS6286/6 is based on the guidance provided in the SAE Aerospace Council document “Organization and Operating Procedures”, section 7.4.2, which identifies that one of the grounds for cancelling a document is “when its technical requirements are totally superseded by another document.”

CANCELLATION NOTICE

This Technical Report has been declared “CANCELLED” as of November 2019 and has been superseded by AS6286A. By this action, this document will remain listed in the respective index, if applicable. Cancelled Technical Reports are available from SAE.

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
SAE WEB ADDRESS: http://www.sae.org

SAE values your input. To provide feedback on this Technical Report, please visit
http://standards.sae.org/AS6286/6A

Documents
Document Sharing Hub

Full document details: SAE AS6286_6A

FOREWORD

Aircraft of the same generic type may have variations and different configurations (i.e., fuselage length/design; cargo or passenger variants; different door configurations; variants may or may not be equipped with wingtip devices or other stabilizing devices, etc.). Where not shown in the diagram, these surfaces shall be deiced and/or anti-iced in accordance with the requirements specified in AS6285, aircraft manufacturers documentation, and operators/providers regulatory approved program.

Permissible fluid application areas are defined, outlining areas where Deicing and Anti-icing fluids (as defined within this document) may be applied respectively. Specific application areas and treatment requirements may vary dependent on aircraft manufacturer; regulatory; operator/provider; and/or operational requirements. Always refer to the operators/providers regulatory approved or accepted program requirements for use in actual operations.

Information contained within these diagrams and cautions may be subject to change without notice.

For aircraft types or variants not listed, refer to the aircraft manufacturer's documentation and/or operators/providers regulatory approved or accepted program requirements.

This manual is divided in two parts:

1. Training and qualification standards, including the scope of training

and

2. Overview and background information about de-icing/anti-icing procedures and related subjects.

RESPONSIBILITIES

This manual is intended to provide a common basis for de-icing/anti-icing training and qualification for de-icing providers and airlines. Each organization involved is responsible for complying with local regulations and requirements imposed by manufacturers of aircraft, equipment, and fluids, by regulatory and environmental authorities.

The responsibility for approval and application of the diagrams contained within this document for actual operations lies solely with the end user.

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

TABLE OF CONTENTS

1. SCOPE 5
1.1 Field of Application 5

2. REFERENCES 5
2.1 Applicable Documents 5
2.2 Definitions and Abbreviations 5

3. AIRCRAFT DIAGRAMS – ADF APPLICATION – NO-SPRAY-ZONES 6
3.1 Diagram Symbols 6
3.1.1 Airbus A300 7
3.1.2 Airbus A310 9
3.1.3 Airbus A318/A319 11
3.1.4 Airbus A320 13
3.1.5 Airbus A321 15
3.1.6 Airbus A330 17
3.1.7 Airbus A340 19
3.1.8 Airbus A350 21
3.1.9 Airbus A380 23
3.1.10 Airbus A400M 25
3.1.11 ATR 42/ATR 72 27
3.1.12 BAE Systems Bae 146/Avro RJ 29
3.1.13 Bae 748/HS 748 31
3.1.14 Jetstream 41/41 33
3.1.15 Beechcraft B1900 35
3.1.16 Boeing B717 37
3.1.17 Boeing B727 39
3.1.18 Boeing B737 41
3.1.19 Boeing B747 43
3.1.20 Boeing B757 45
3.1.21 Boeing B767 47
3.1.22 Boeing B777 49
3.1.23 Boeing B787 51
3.1.24 Boeing/C-17 53
3.1.25 Boeing/MD DC-8 55
3.1.26 Boeing/MD DC-9 57
3.1.27 Boeing/MD DC-10/MD-10/MD-11 59
3.1.28 Boeing/MD MD80/MD90 All Series 61
3.1.29 Canadair Regional Jet 100/200 Series 63
3.1.30 Canadair Regional Jet 700/900/1000 Series 65
3.1.31 DeHavilland Dash 8-100/200/300 Series 67
3.1.32 DeHavilland Dash 8-400/Q400 Series 69
3.1.33 Bombardier Global Express 71
3.1.34 Learjet 73
3.1.35 Shorts 330 75
3.1.36 Cessna Caravan C208 77
3.1.37 Dassault Falcon 79
3.1.38 Embraer E120 81
3.1.39 Embraer E135/E140/145 83
3.1.40 Embraer E170/E175 85
3.1.41 Embraer E190/E195 87
3.1.42 Fairchild Dornier D328 Propeller 89
3.1.43 Fairchild Dornier J328 Jet 91

Document Sharing Hub

Full document details: SAE AS6286_6A

3.1.44 Fairchild Metro/Merlin 93
3.1.45 Fokker F70/F100 95
3.1.46 Gulfstream 97
3.1.47 Ilyushin IL62 99
3.1.48 Ilyushin IL76 101
3.1.49 Ilyushin IL96 103
3.1.50 Lockheed C-130 105
3.1.51 Lockheed L1011 107
3.1.52 Saab 340/2000 109
3.1.53 Tupolev Tu-204/Tu-214 111

4. BACKGROUND INFORMATION 113
4.1 Aircraft Types 113
4.1.1 Consideration of Aircraft Variations 113
4.1.2 Aircraft No-Spray Areas in General 113
4.1.3 APU 113
4.1.4 Jet- Aircraft Versus Propellers 113
4.1.5 Aircraft Ice Detection and Prevention Systems 114
4.1.6 Common Aircraft Types and Design 114
4.1.7 Precautions with Aircraft Turn-Around 115
4.2 Aircraft Types 115
4.2.1 Airbus 116
4.2.2 Boeing 120
4.2.3 Other Aircraft 130
4.2.4 General Russian and Eastern Production Aircraft Types 141
4.2.5 General Business Jets, Small Aircraft 150
4.3 Aircraft category 164
4.4 Amount of Fluid for Anti-Icing with Thickened Fluids 167

5. NOTES 170
5.1 Revision Indicator 170

FIGURE 1 AIRCRAFT CONTROLS AND DESCRIPTION 115

TABLE 1 167

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

1. SCOPE

1.1 Field of Application

This document shall be used in conjunction with:

- AS6286, Training and Qualification Program for Deicing/Anti-icing of Aircraft on the Ground
- AS6286/1, Processes Including Methods
- AS6286/2, Equipment
- AS6286/3, Fluids
- AS6286/4, Weather
- AS6286/5, Health, Safety and First Aid

2. REFERENCES

2.1 Applicable Documents

Refer to AS6286 main document Section 2 for all applicable and related publications.

2.2 Definitions and Abbreviations

Refer to AS6285 Aircraft Ground Deicing/Anti-icing Processes.

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

3. AIRCRAFT DIAGRAMS – ADF APPLICATION – NO-SPRAY-ZONES

3.1 Diagram Symbols



Thin hoarfrost is acceptable on the upper surface of the fuselage proved all vents and ports are clear. Thin hoarfrost is thin enough to distinguish paint lines, markings or lettering.



Coating of frost up to 1/8th inch (3 mm) in thickness on the lower wing surfaces caused by cold fuel in the wing tank areas between the front and rear spar is permissible. However, all leading edge devices, control surfaces, tab surfaces, upper wing surfaces and balance bay cavities **MUST** be free of ice, snow, slush or frost.



Engine intake **MUST** be free of all contaminants and engine fan blades **MUST** freely rotate.



Engine intake **MUST** be free of all contaminants and engine fan blades **MUST** freely rotate. Fuselage **MUST** be inspected prior to engine start when conditions warrant.



Propellers must be free of all contaminants before engine start.



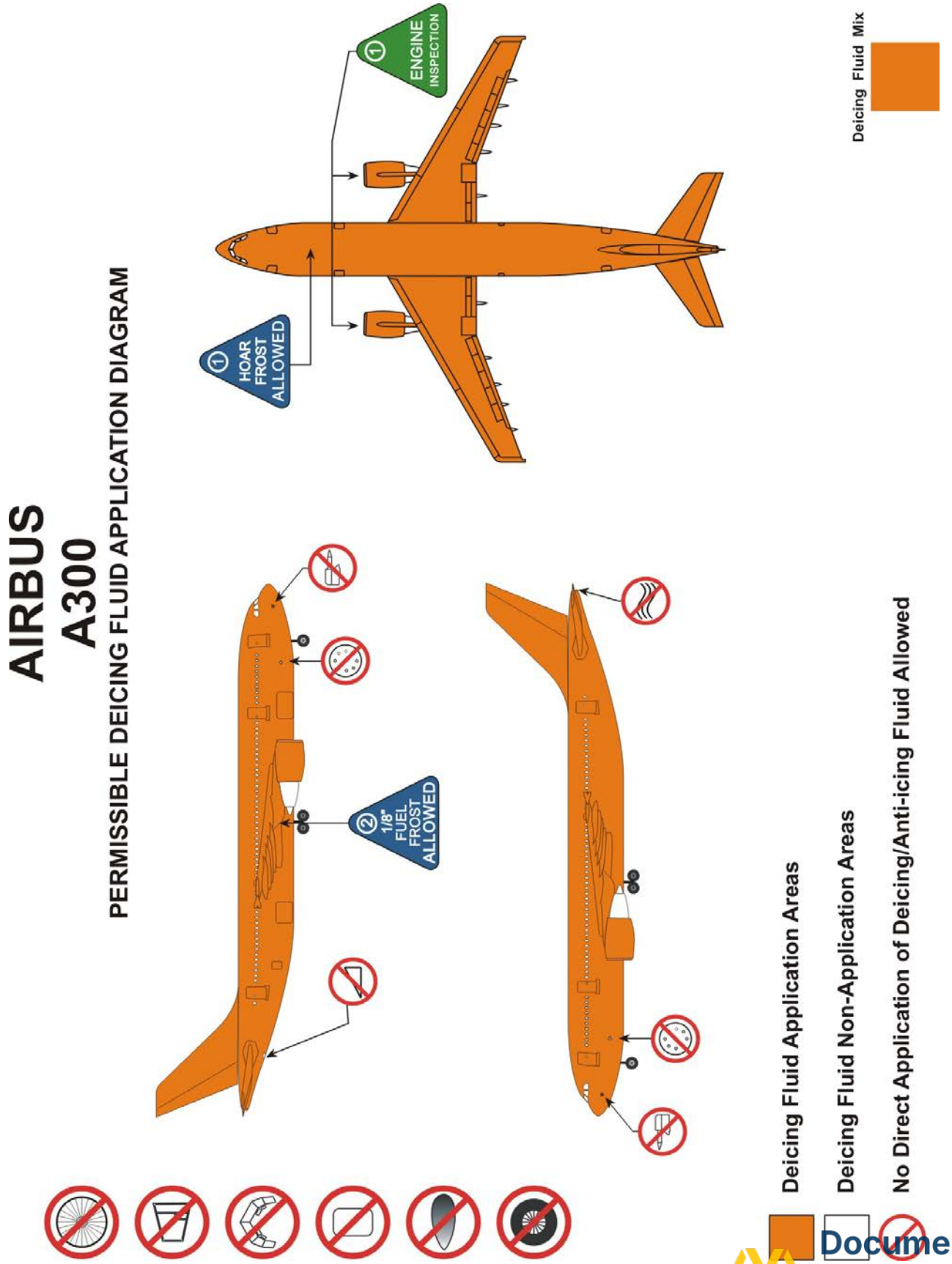
Do not apply undiluted Type II, III or IV fluids forward of the front cabin entry door. Do not apply to windshields or windscreens.



Check upper wing surface to confirm that ice is not present. A physical check (tactile inspection) **MUST** be conducted on the wings upper surfaces at inboard end of wing fuel tank and/or other areas as specified by the aircraft manufacturer. Specific Airworthiness Directive requirements may apply.

AVA Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

3.1.1 Airbus A300



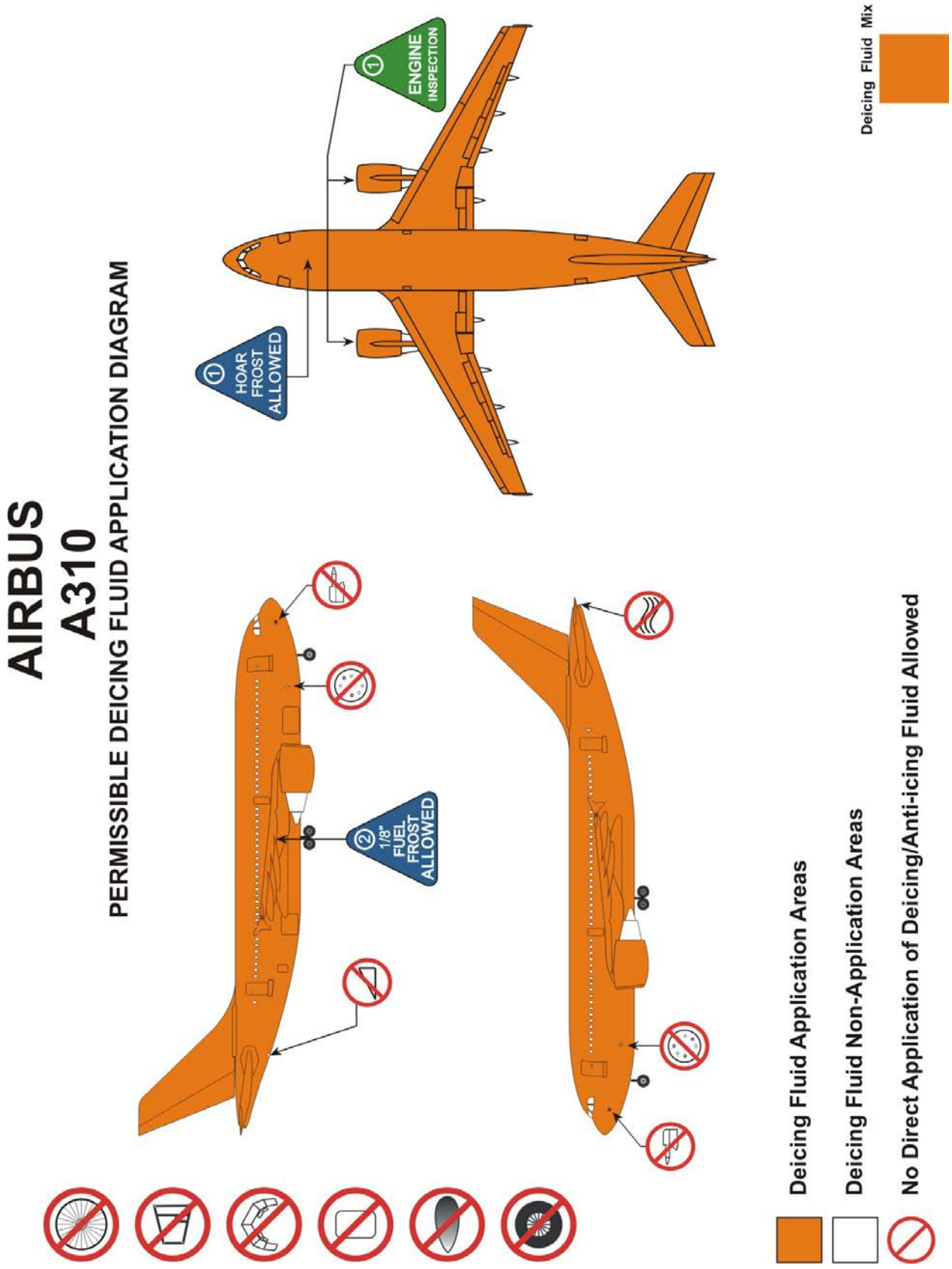
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

AIRBUS A300

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

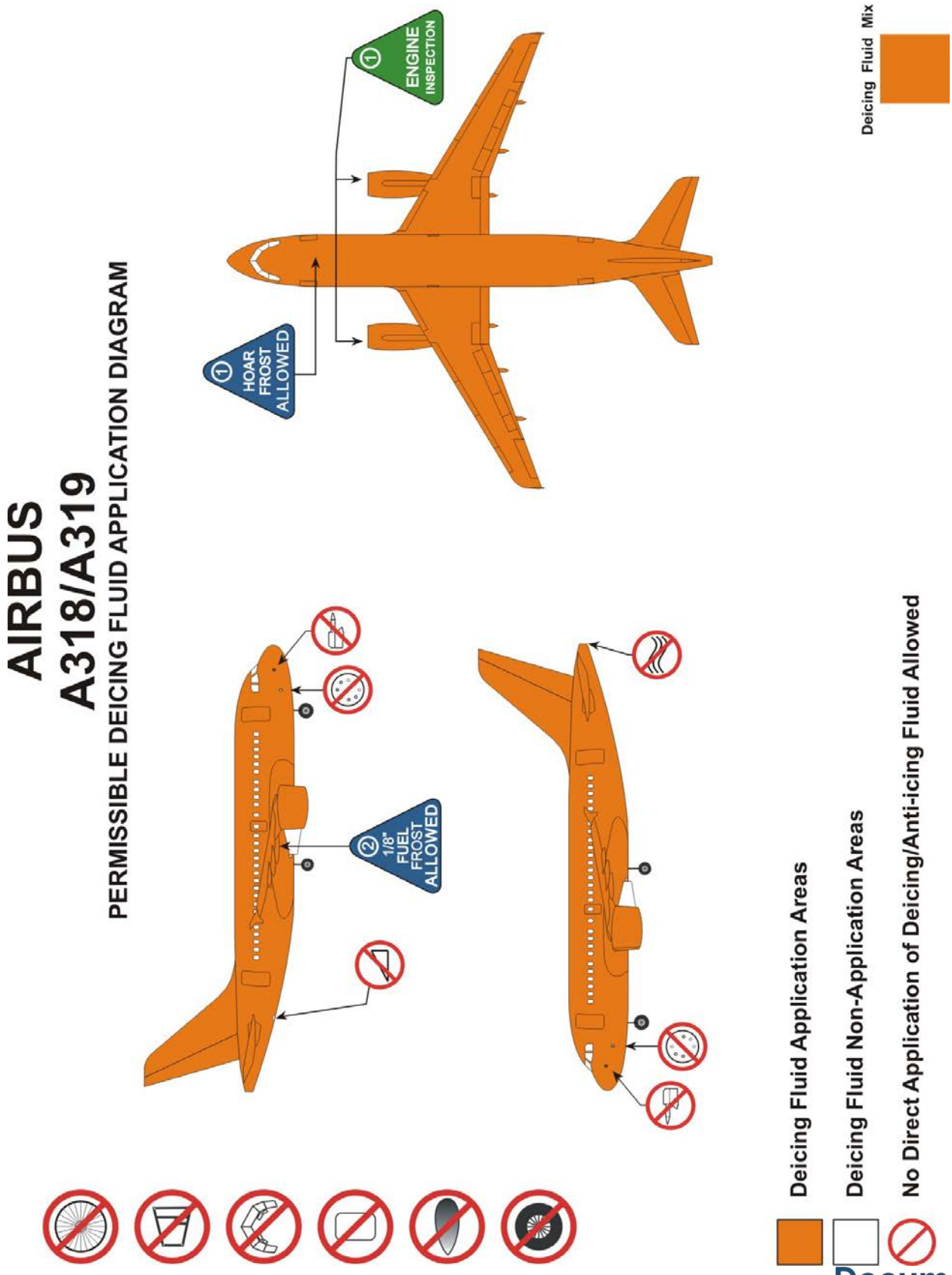
3.1.2 Airbus A310



Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

3.1.3 Airbus A318/A319

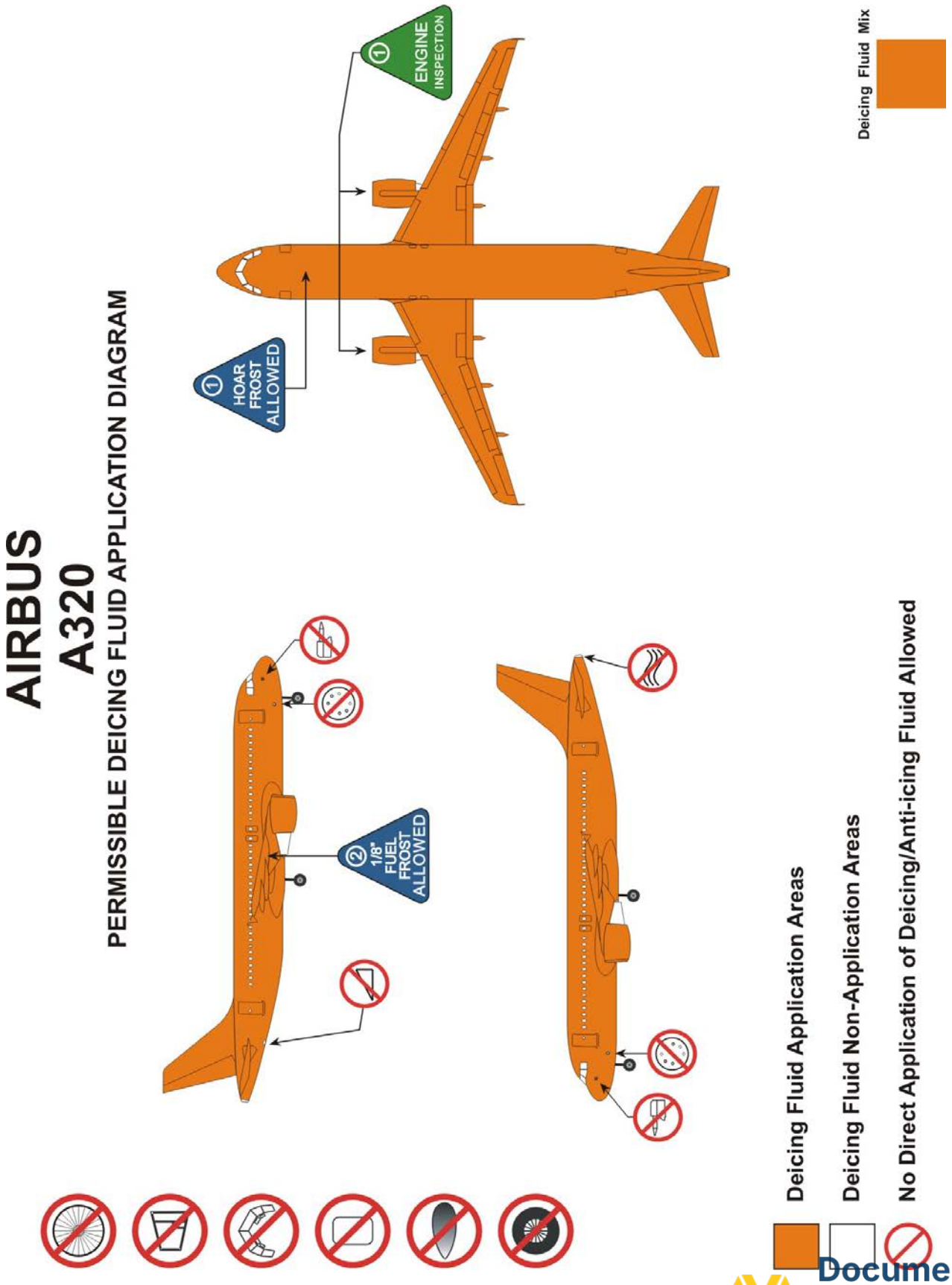


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

Full document details: SAE AS6286_6A

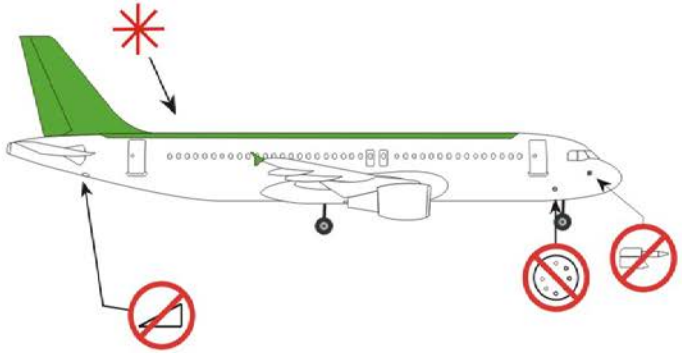
3.1.4 Airbus A320

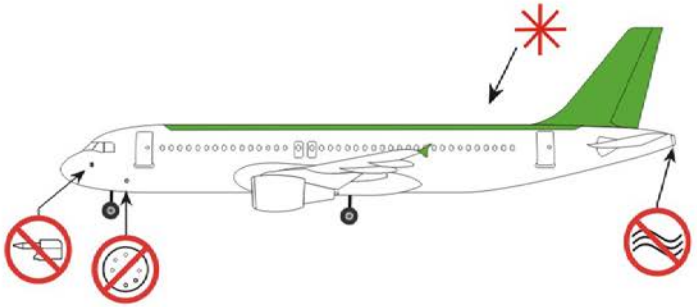


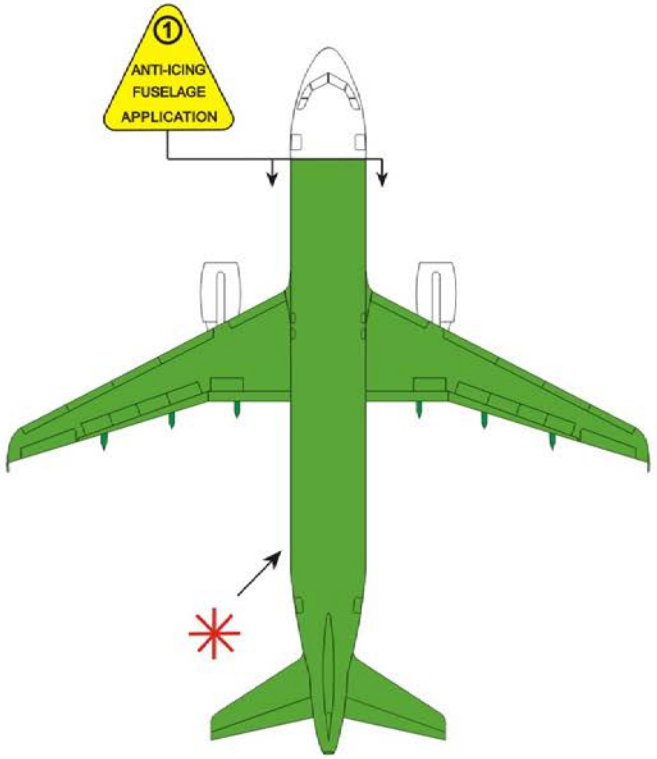
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

AIRBUS
A320
PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM









Anti-icing Fluid Application Areas

Anti-icing Fluid Non-Application Areas

No Direct Application of Deicing/Anti-icing Fluid Allowed

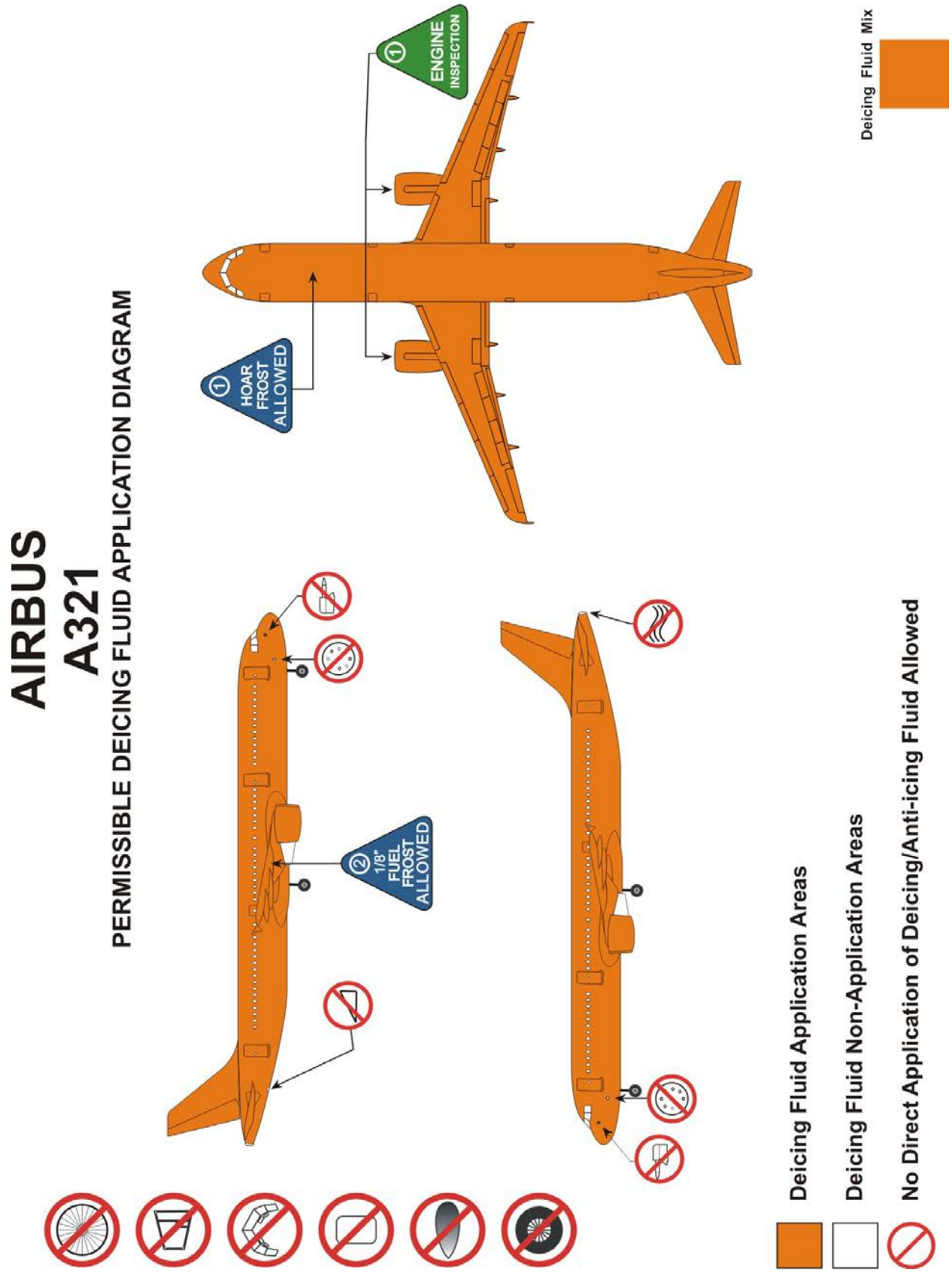
Fuselage Anti-icing Application on PIC Request

Anti-icing Fluid

Full document details: SAE AS6286_6A

AVA Documents Document Sharing Hub

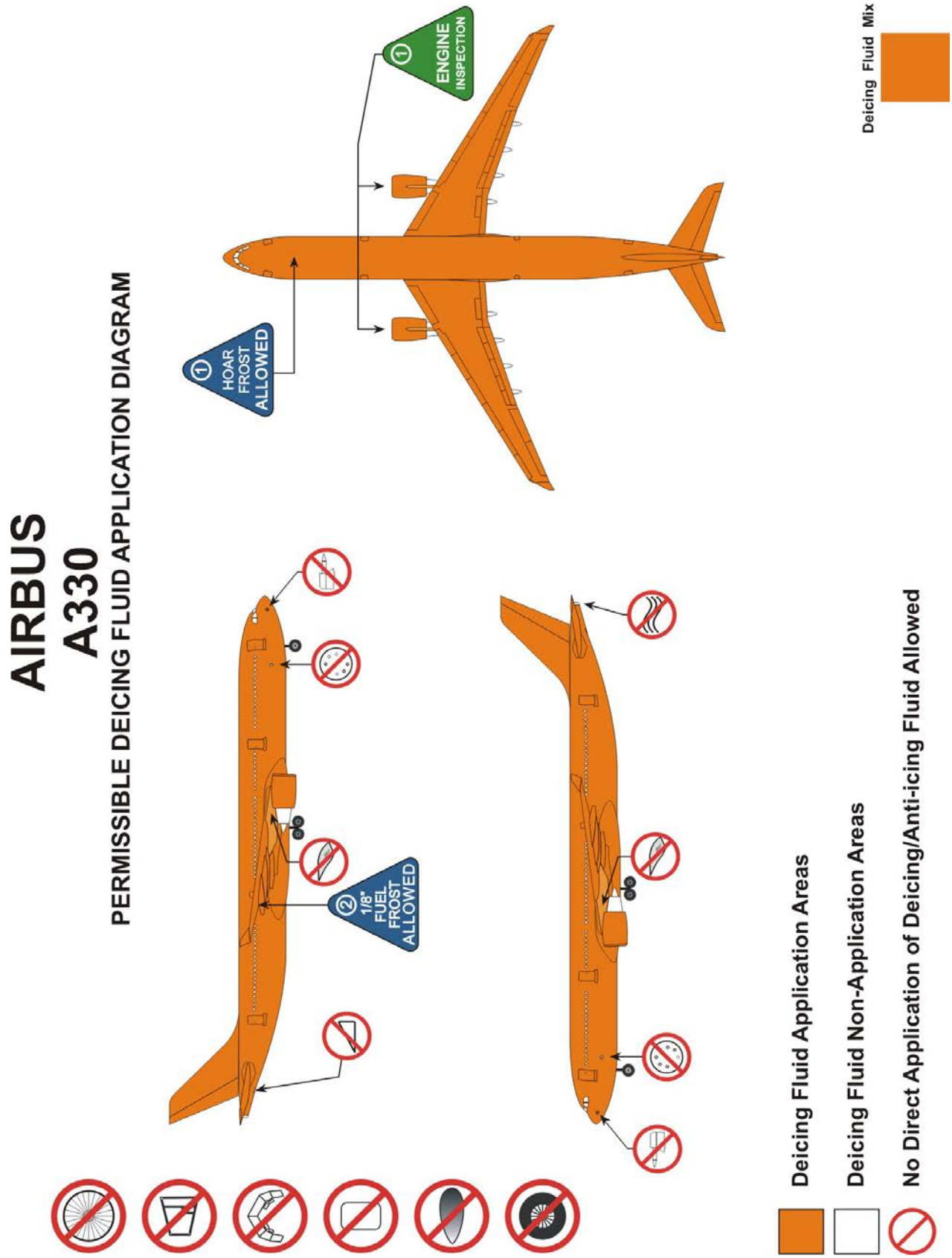
3.1.5 Airbus A321



Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

3.1.6 Airbus A330



Documents
Document Sharing Hub

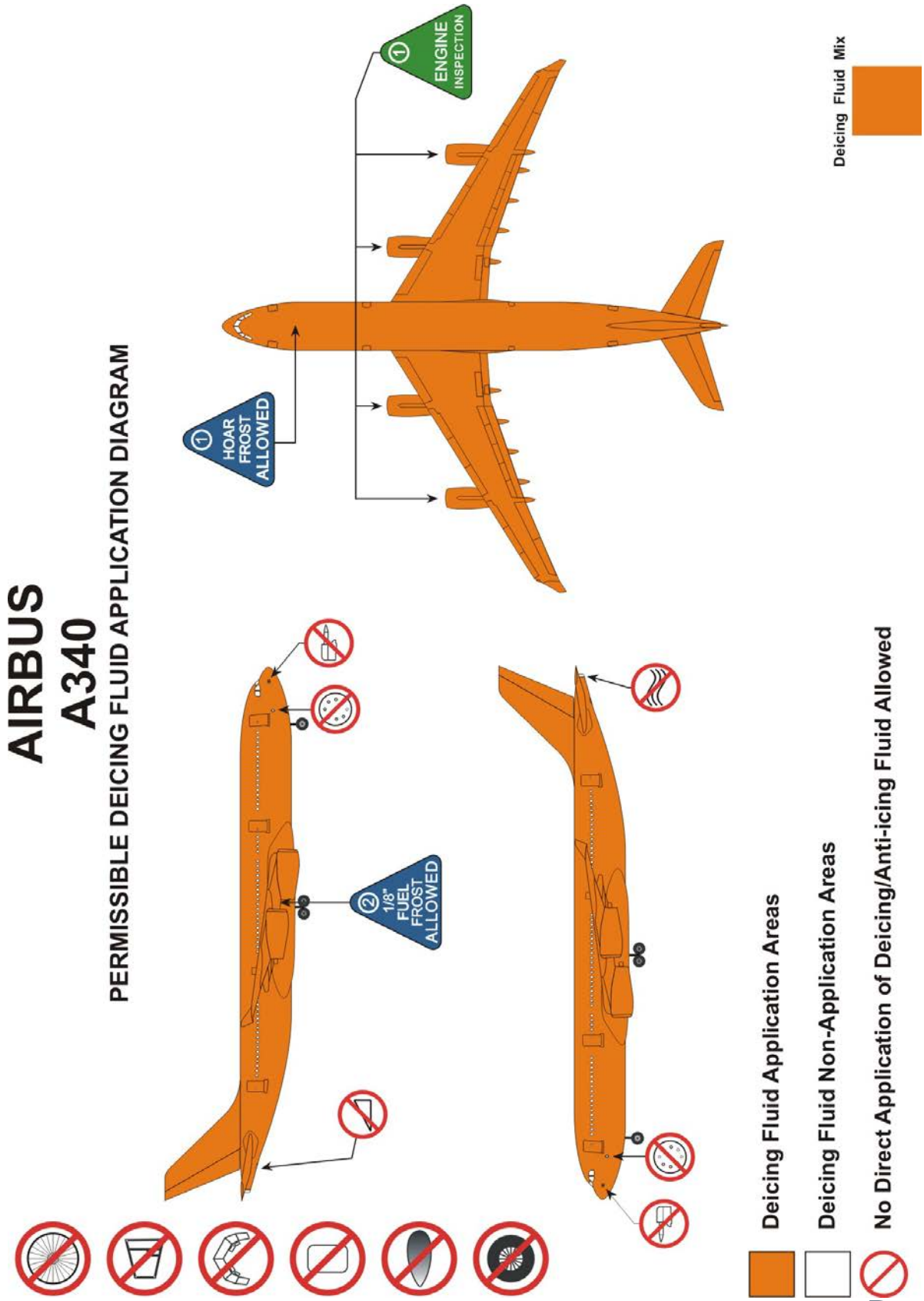
AIRBUS A330

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

AVA Documents
Document Sharing Hub

Full document details: SAE AS6286_6A

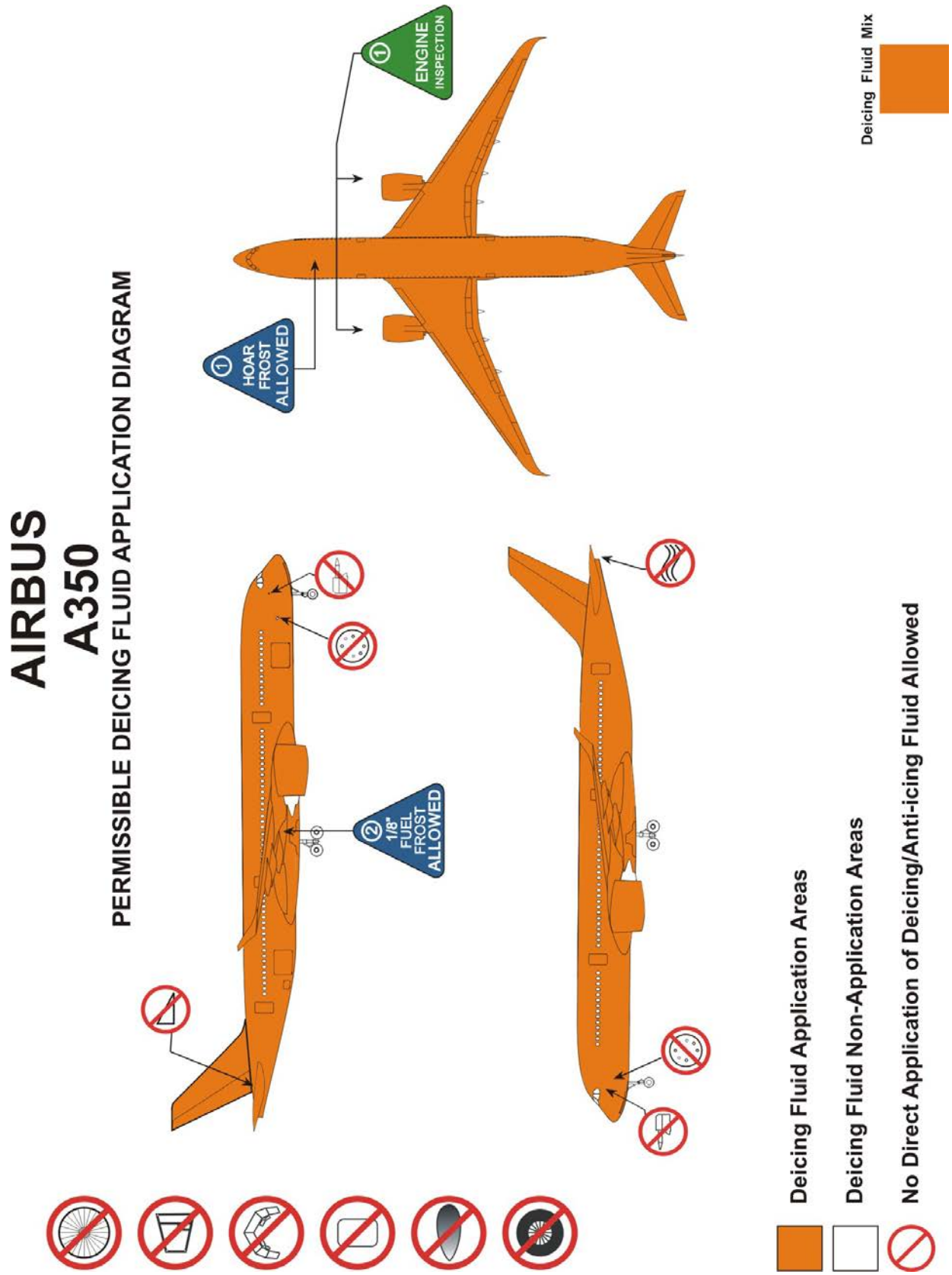
3.1.7 Airbus A340



Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

3.1.8 Airbus A350

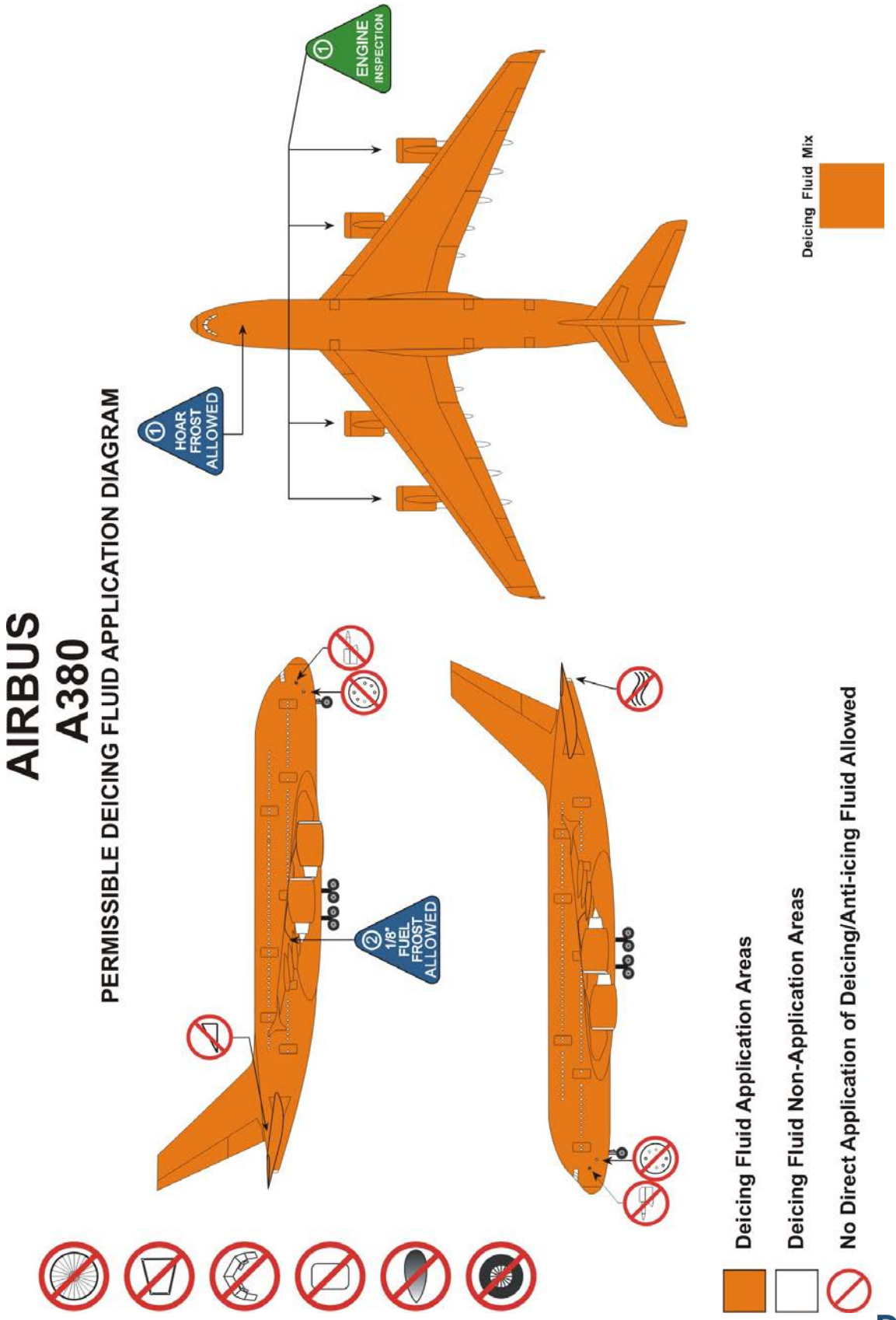


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

Full document details: SAE AS6286_6A

3.1.9 Airbus A380

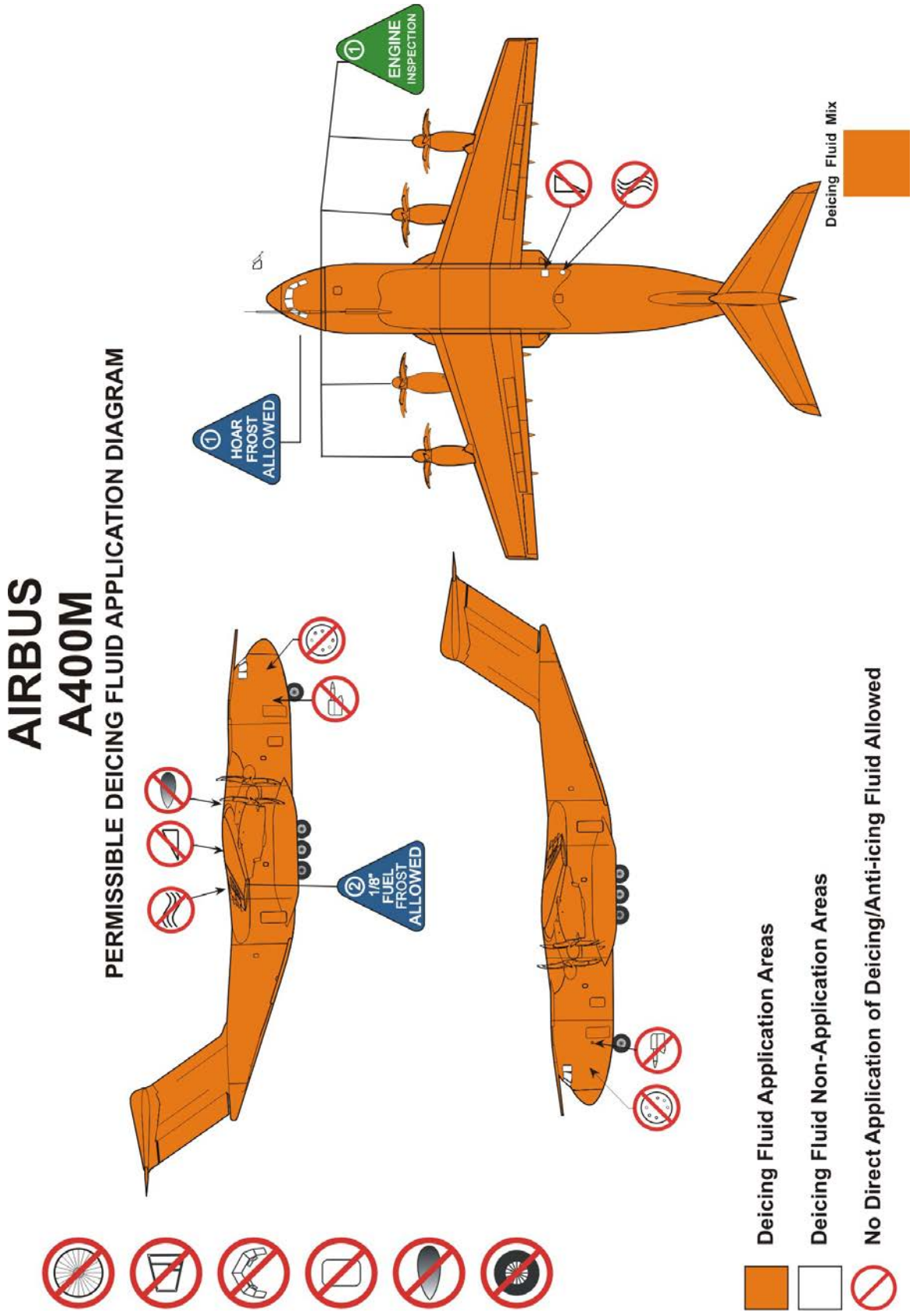


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Documents
Document Sharing Hub

Full document details: SAE AS6286_6A

3.1.10 Airbus A400M

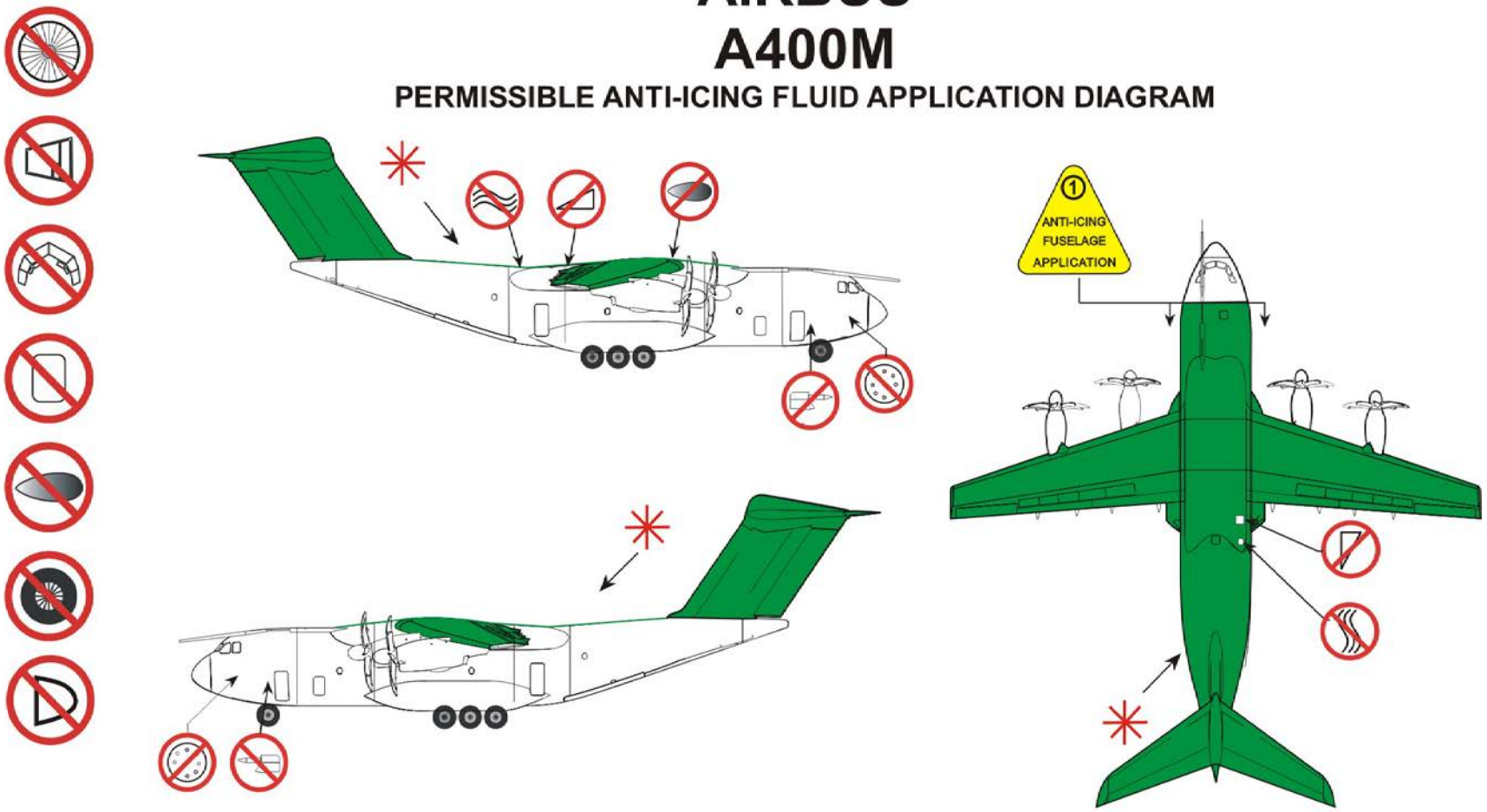


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

Full document details: SAE AS6286_6A

AIRBUS
A400M

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM



Anti-icing Fluid Application Areas

Anti-icing Fluid Non-Application Areas

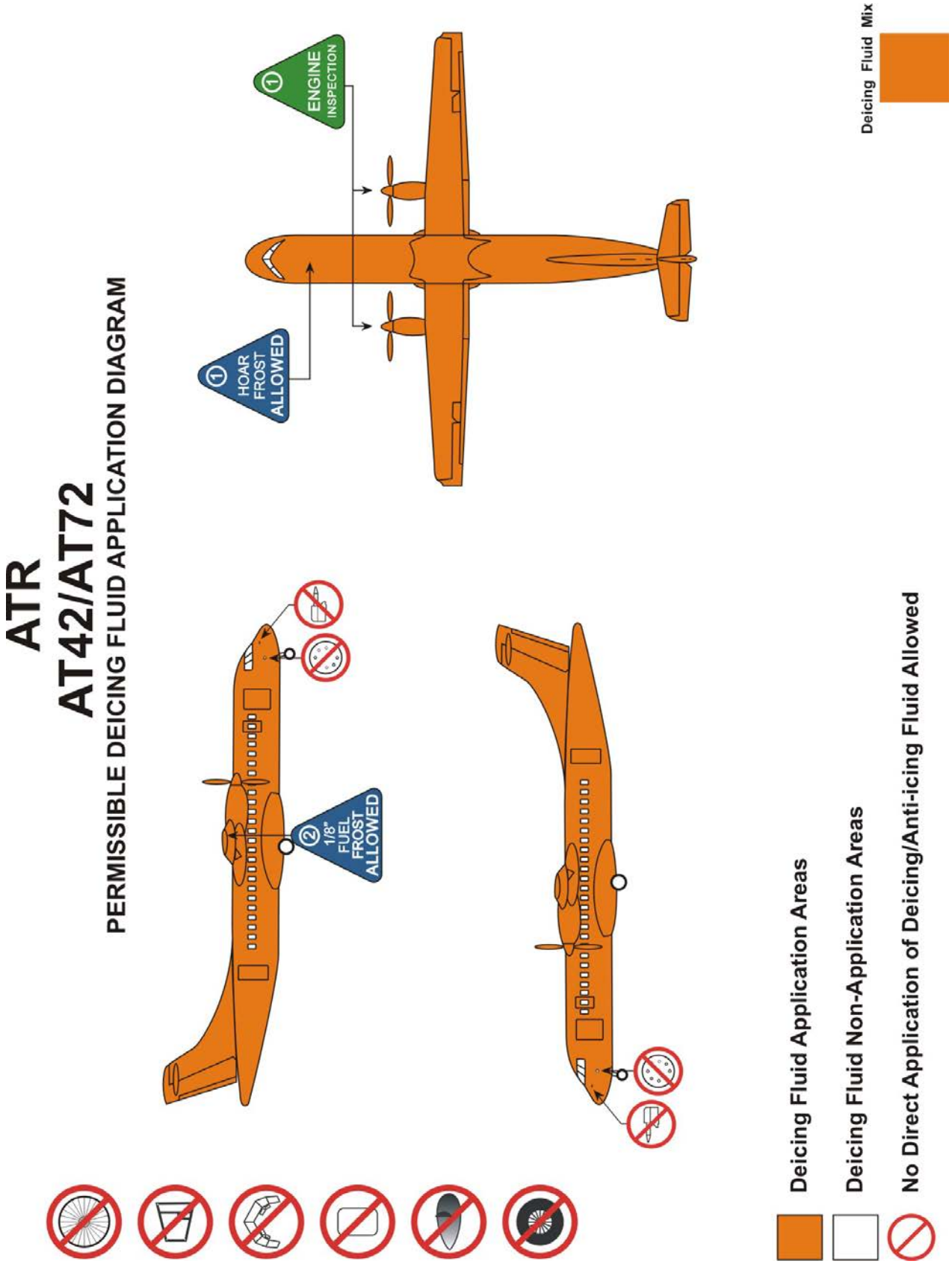
No Direct Application of Deicing/Anti-icing Fluid Allowed

Fuselage Anti-icing Application on PIC Request

Anti-icing Fluid

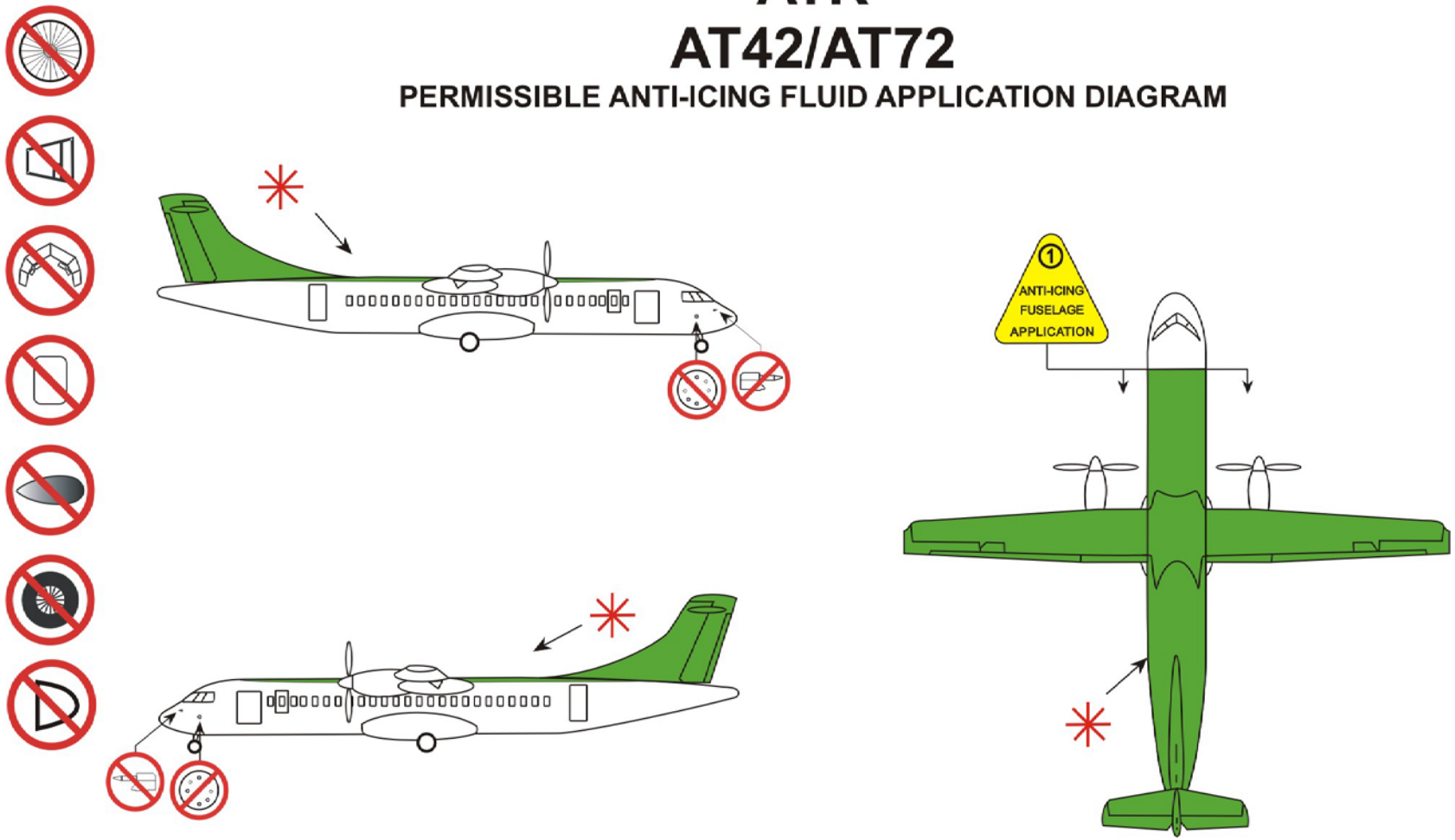
AVA Documents
Document Sharing Hub

3.1.11 ATR 42/ATR 72



Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

ATR
AT42/AT72
PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM



Anti-icing Fluid Application Areas

Anti-icing Fluid Non-Application Areas

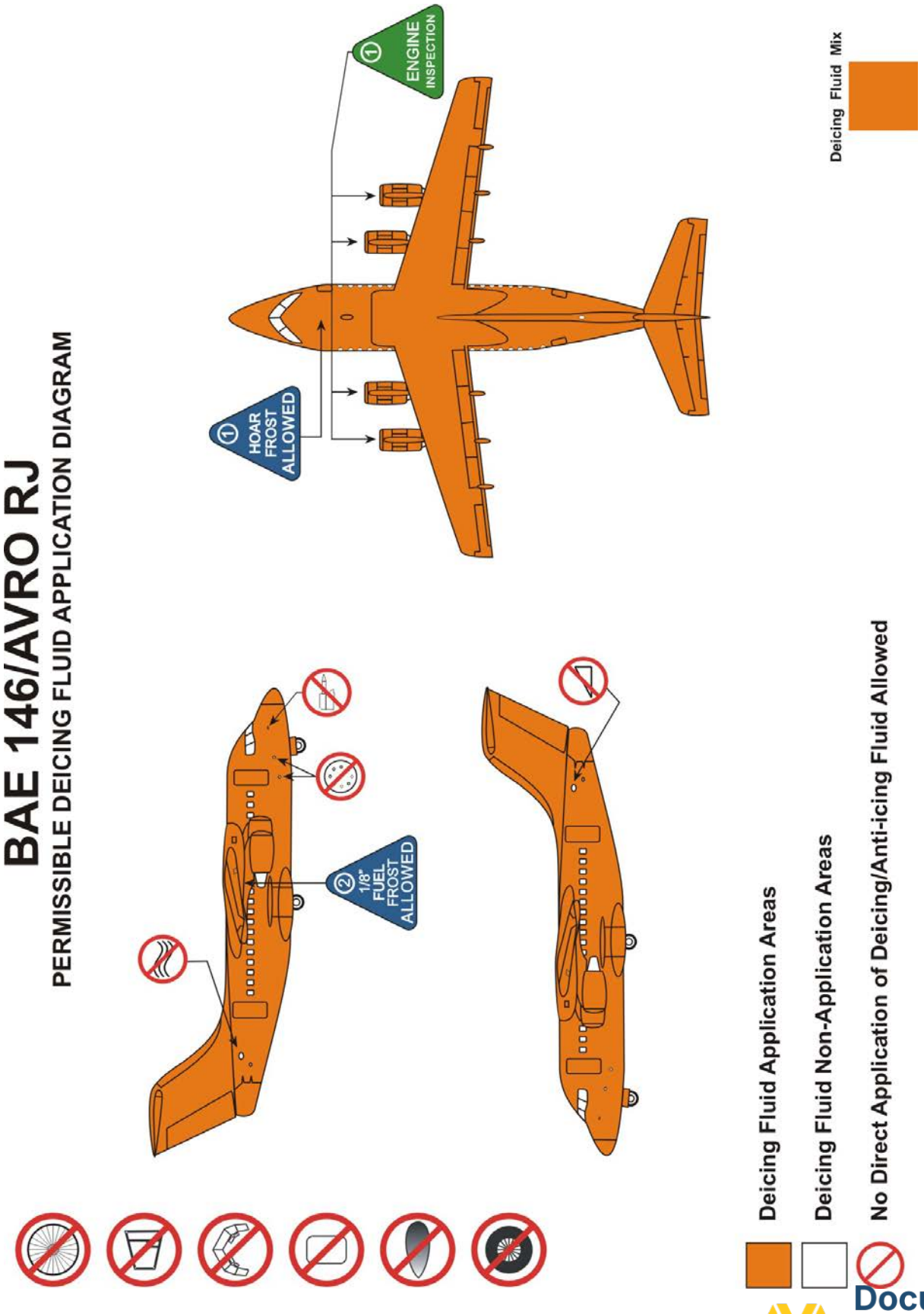
No Direct Application of Deicing/Anti-icing Fluid Allowed

Fuselage Anti-icing Application on PIC Request

Anti-icing Fluid

Full document details: SAE AS6286_6A
AVA Documents Document Sharing Hub

3.1.12 BAE Systems Bae 146/Avro RJ



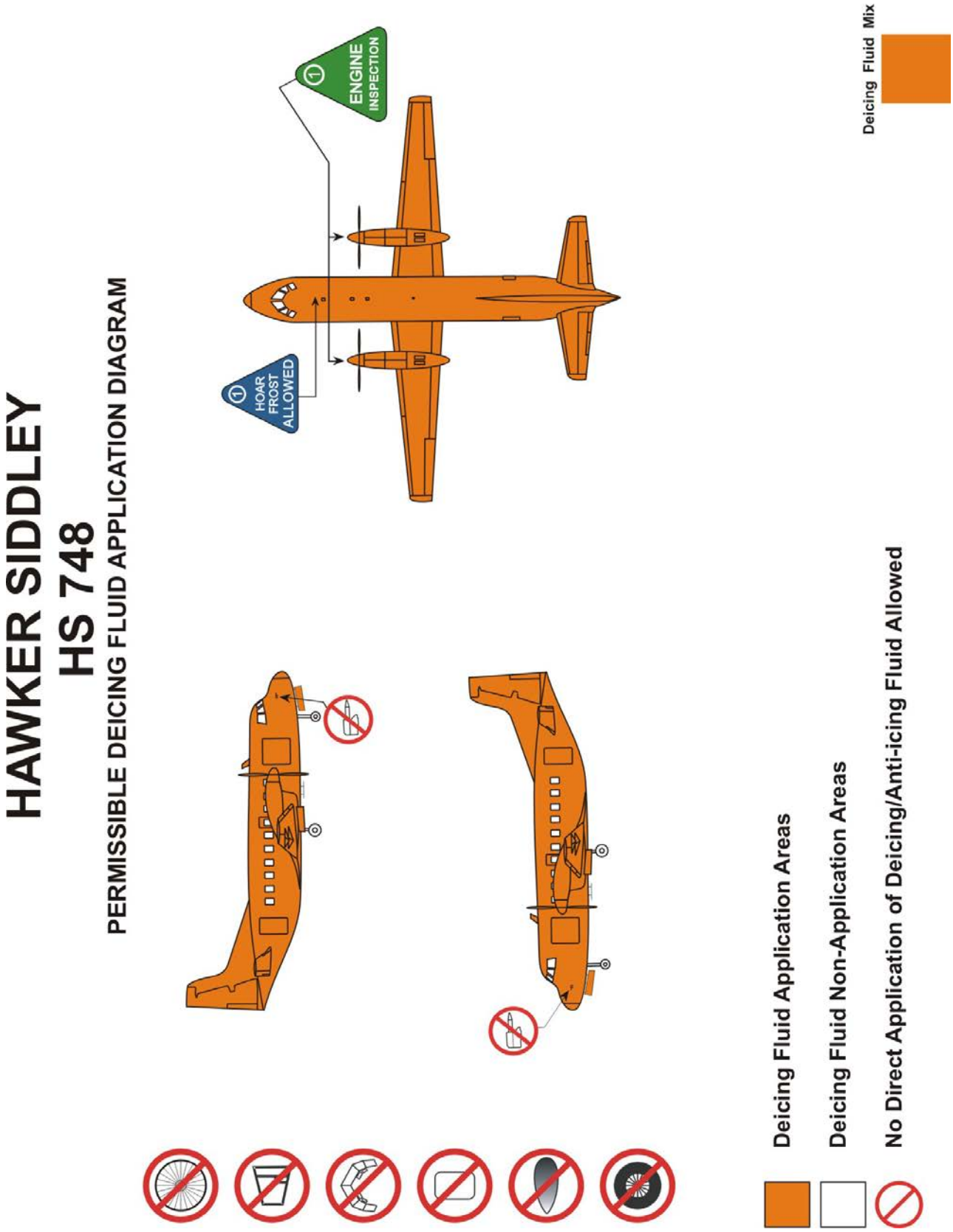
Documents
Document Sharing Hub

BAE 146/AVRO RJ

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

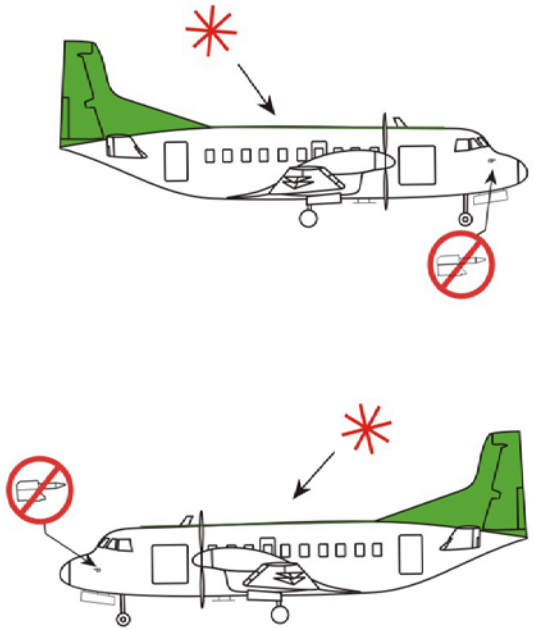
3.1.13 Bae 748/HS 748

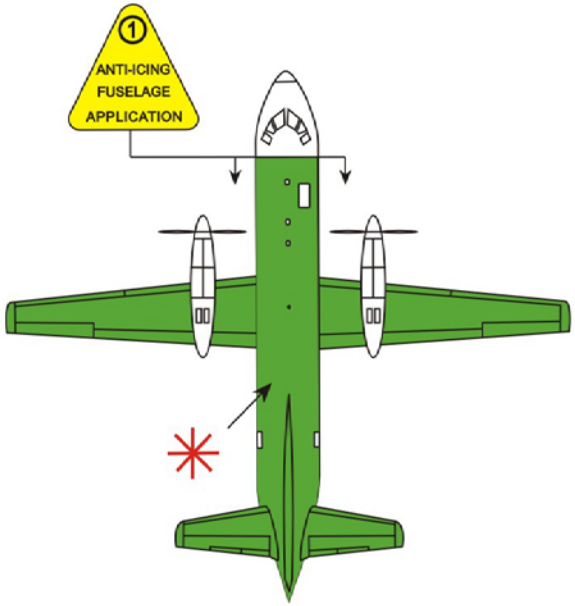


Documents
Document Sharing Hub

HAWKER SIDDLEY
HS 748
PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM







Anti-icing Fluid Application Areas

Anti-icing Fluid Non-Application Areas

No Direct Application of Deicing/Anti-icing Fluid Allowed

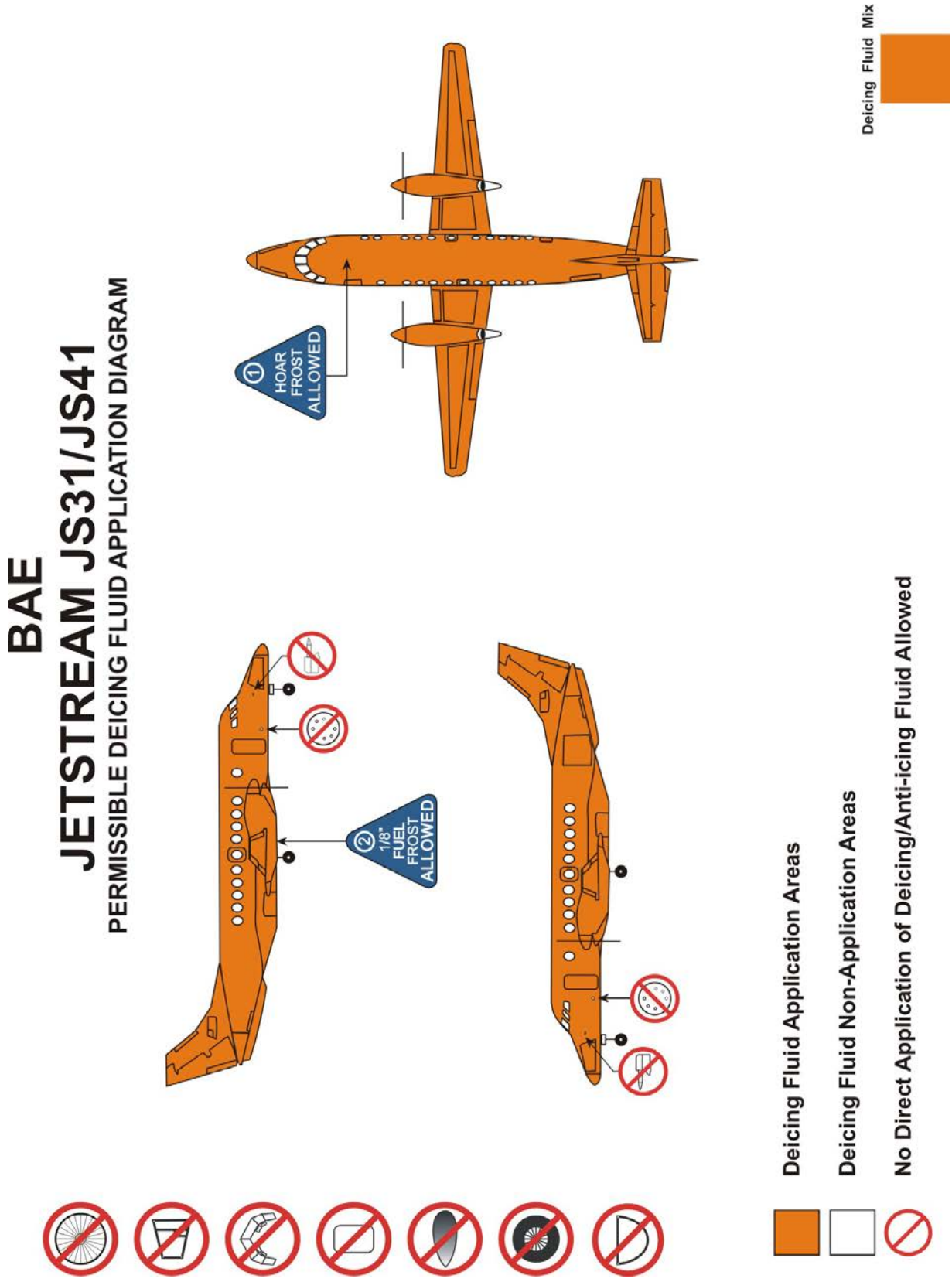
Fuselage Anti-icing Application on PIC Request

Anti-icing Fluid

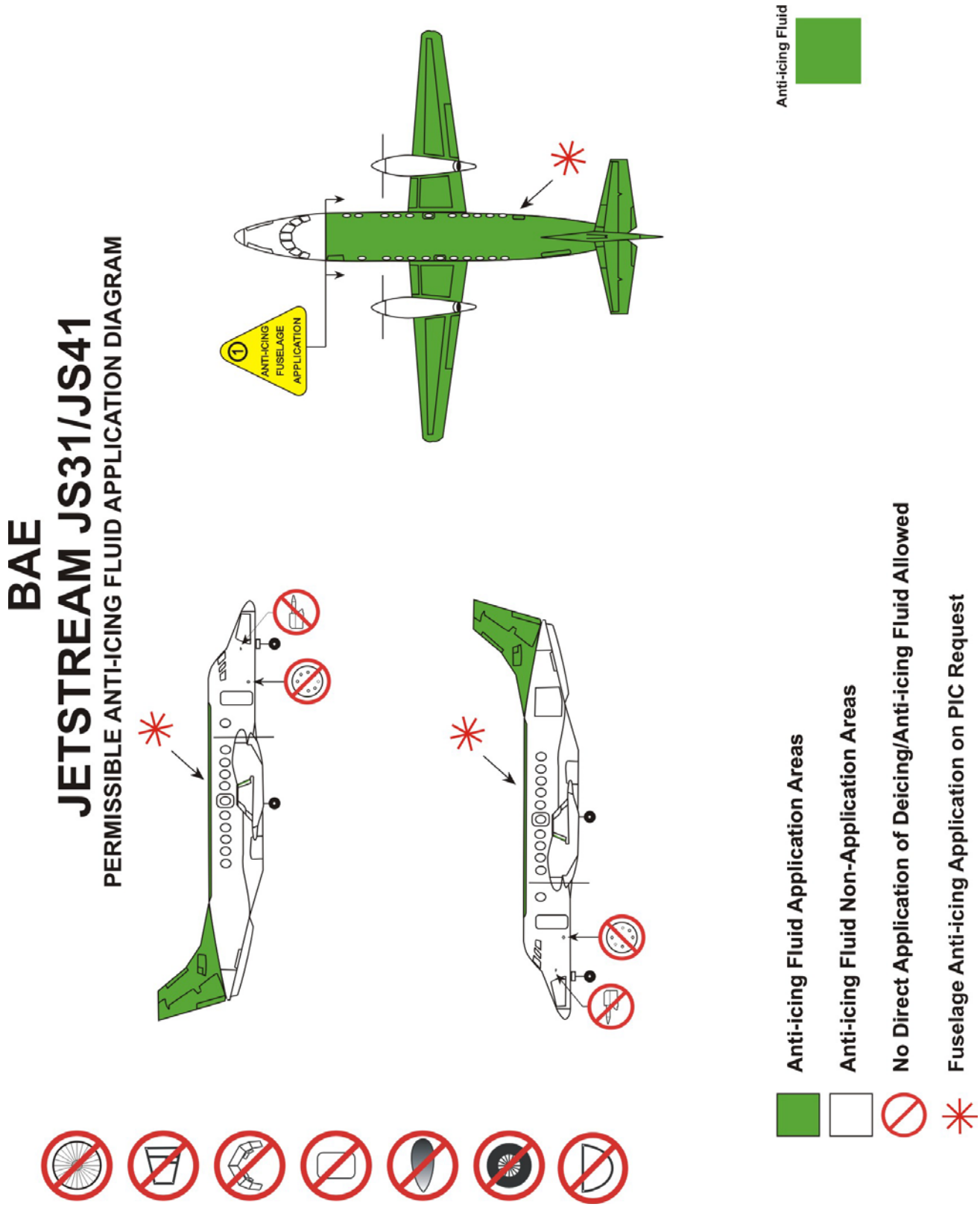
Full document details: SAE AS6286_6A

AVA Documents
Document Sharing Hub

3.1.14 Jetstream 41/41

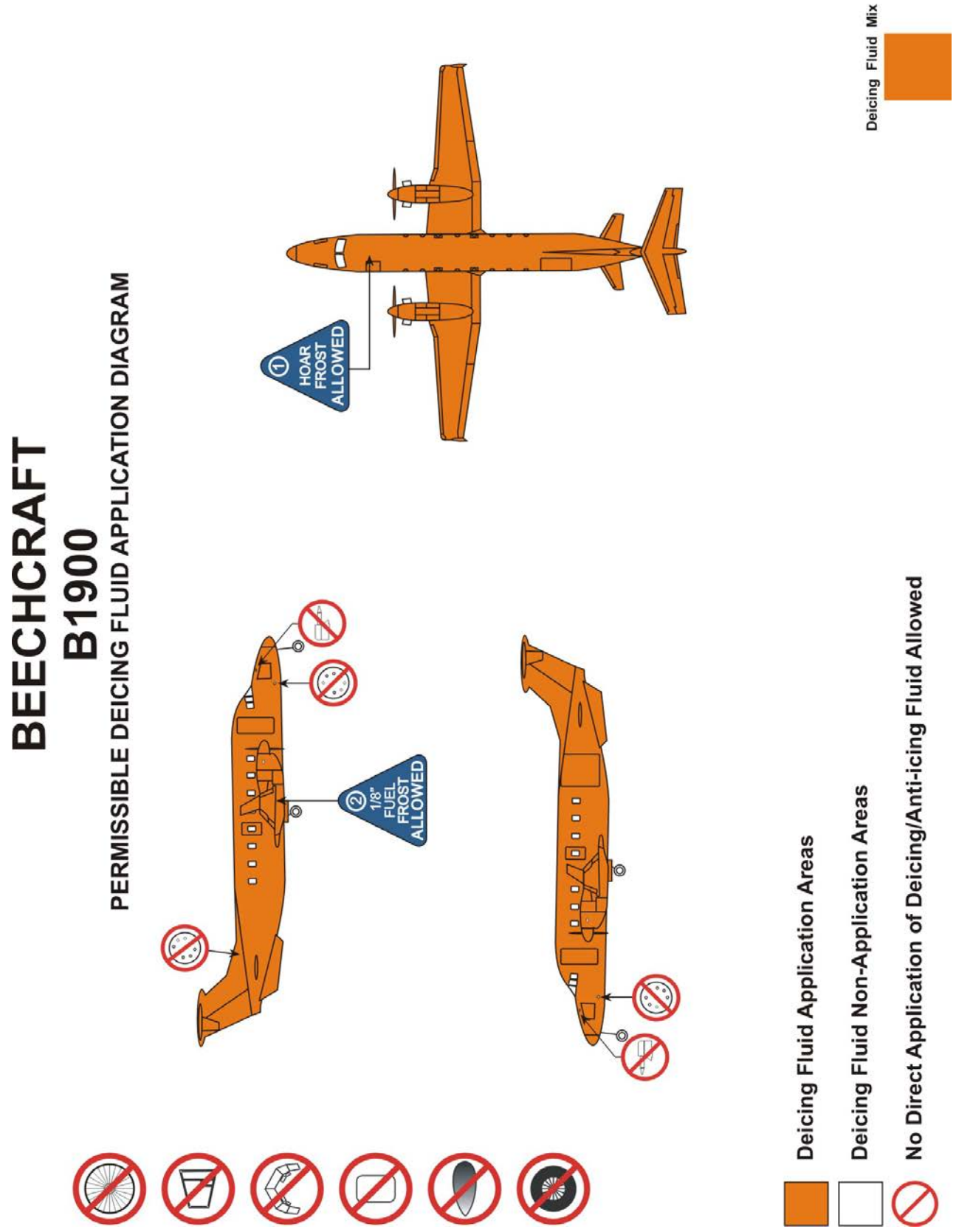


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A



Documents
Document Sharing Hub

3.1.15 Beechcraft B1900

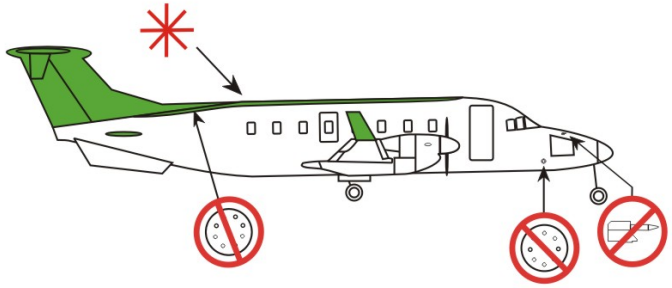


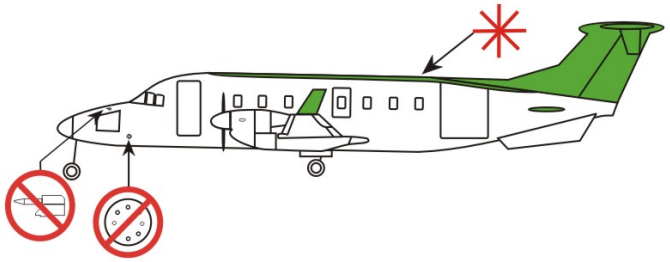
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

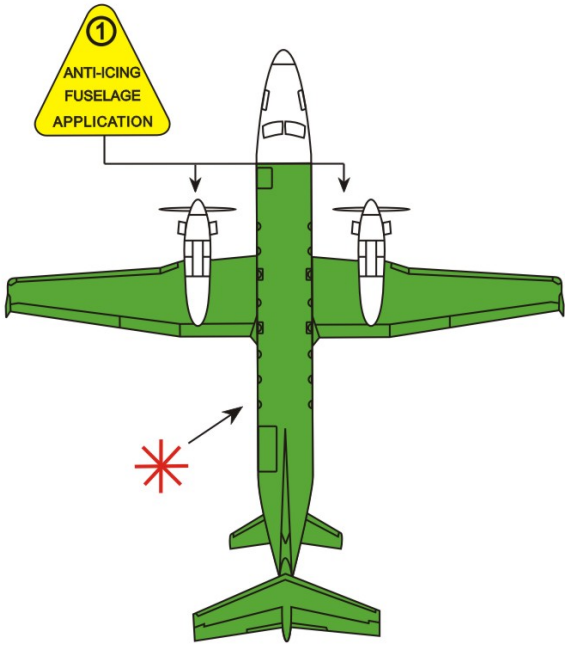
BEECHCRAFT
B1900

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM









Anti-icing Fluid Application Areas

Anti-icing Fluid Non-Application Areas

No Direct Application of Deicing/Anti-icing Fluid Allowed

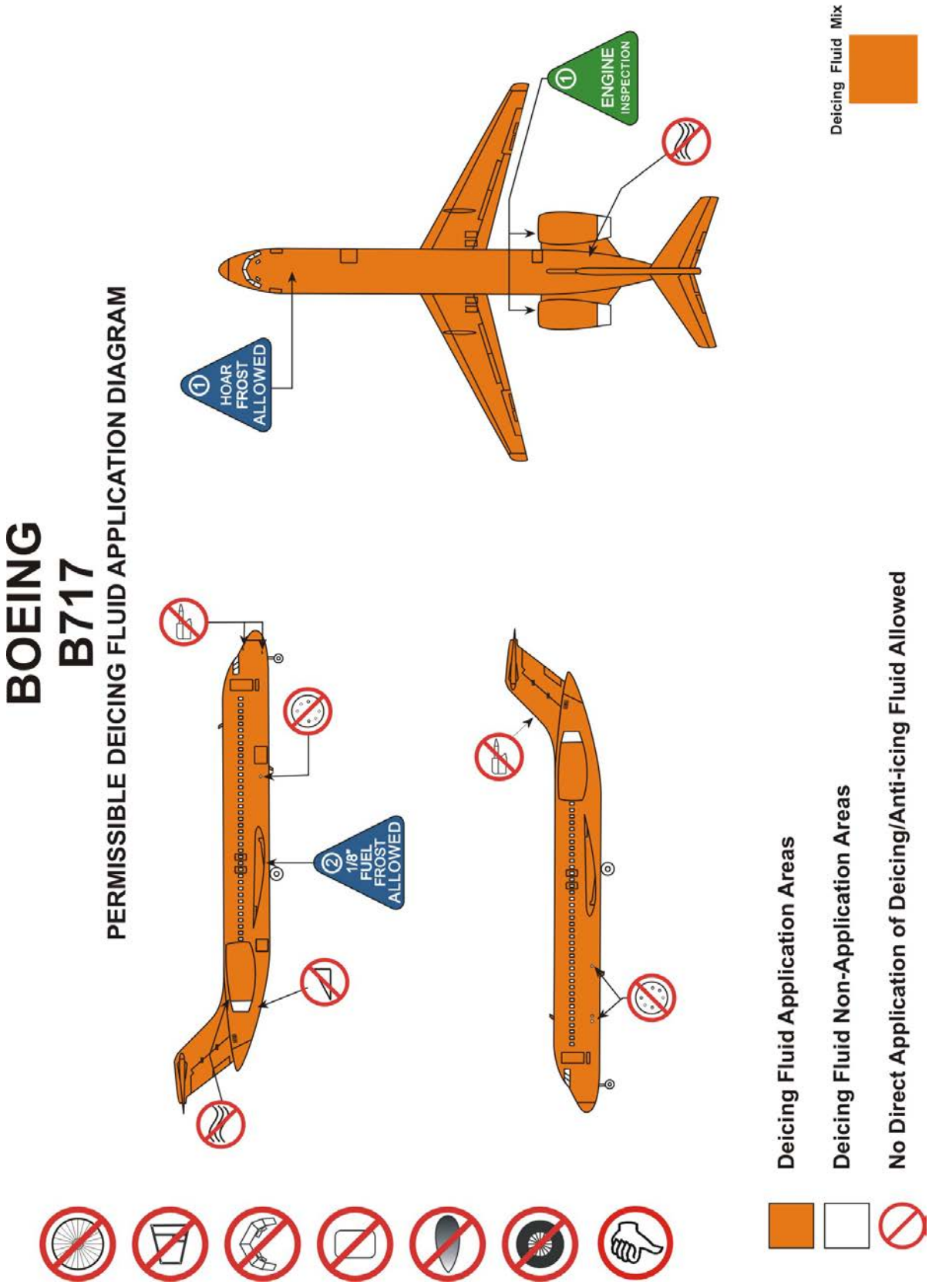
Fuselage Anti-icing Application on PIC Request

Anti-icing Fluid

Full document details: SAE AS6286_6A

AVA Documents
Document Sharing Hub

3.1.16 Boeing B717



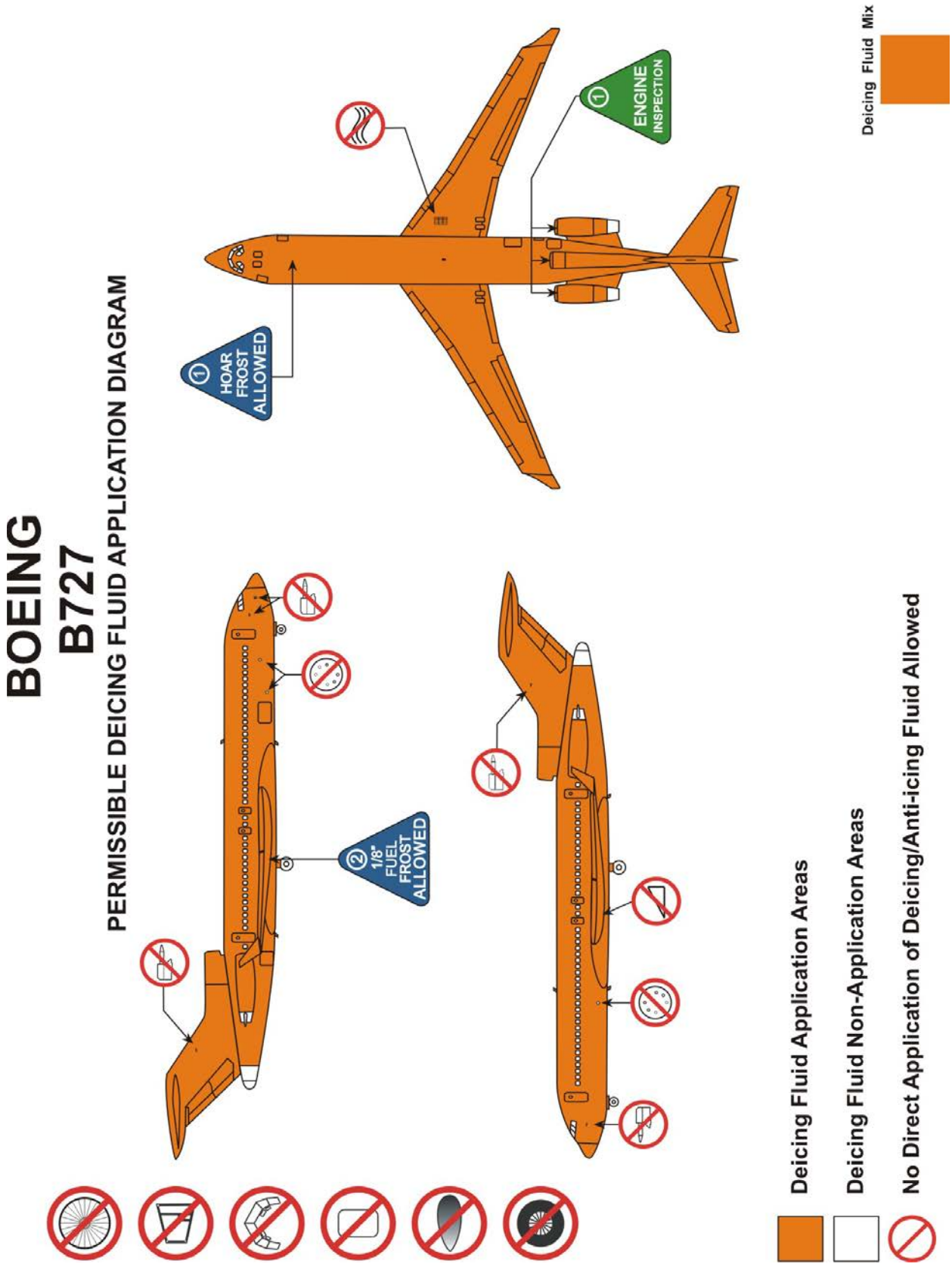
Documents
Document Sharing Hub

BOEING B717

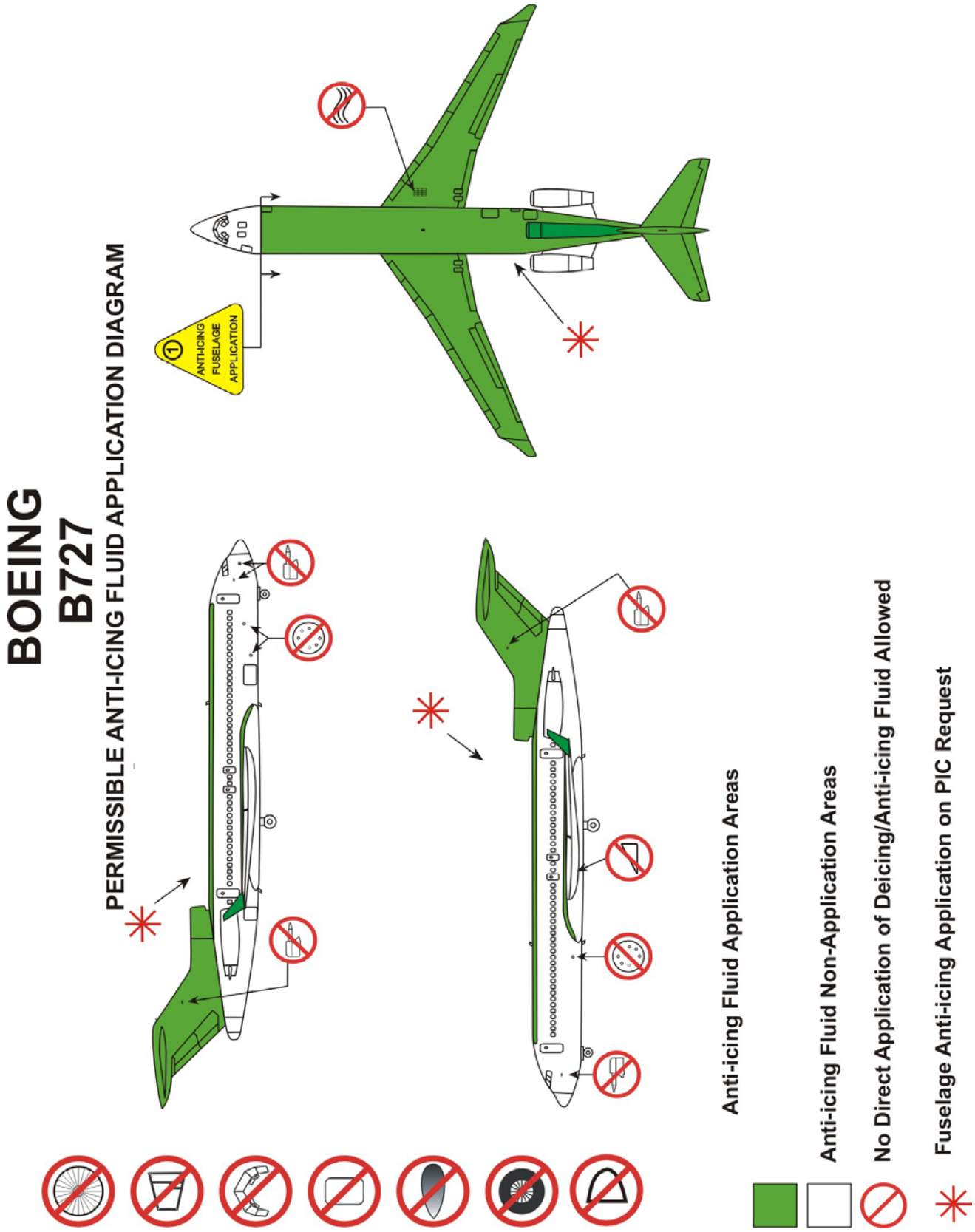
PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub

3.1.17 Boeing B727

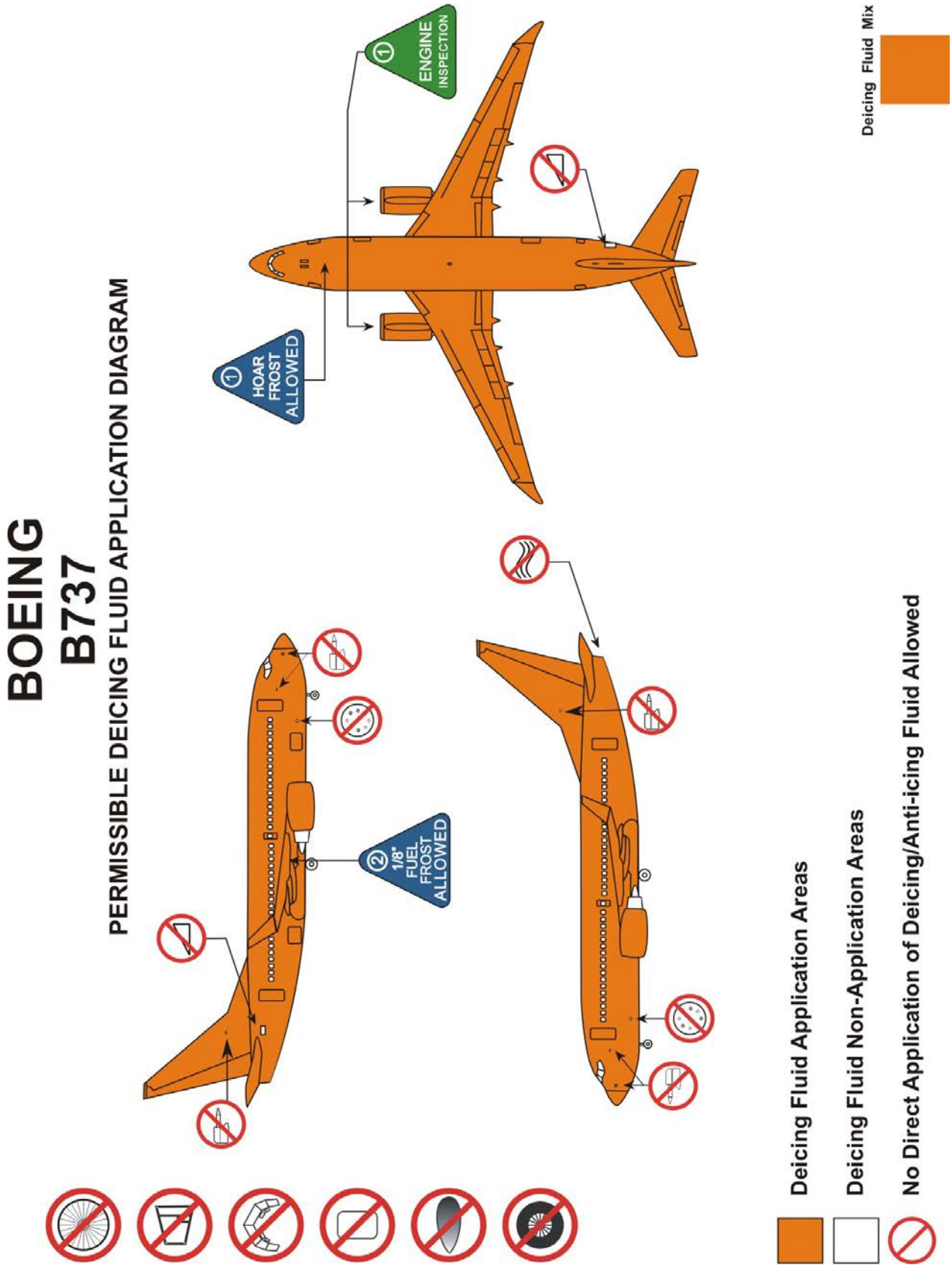


Documents
Document Sharing Hub
Full document details: SAE AS6286_6A



Documents
Document Sharing Hub

3.1.18 Boeing B737



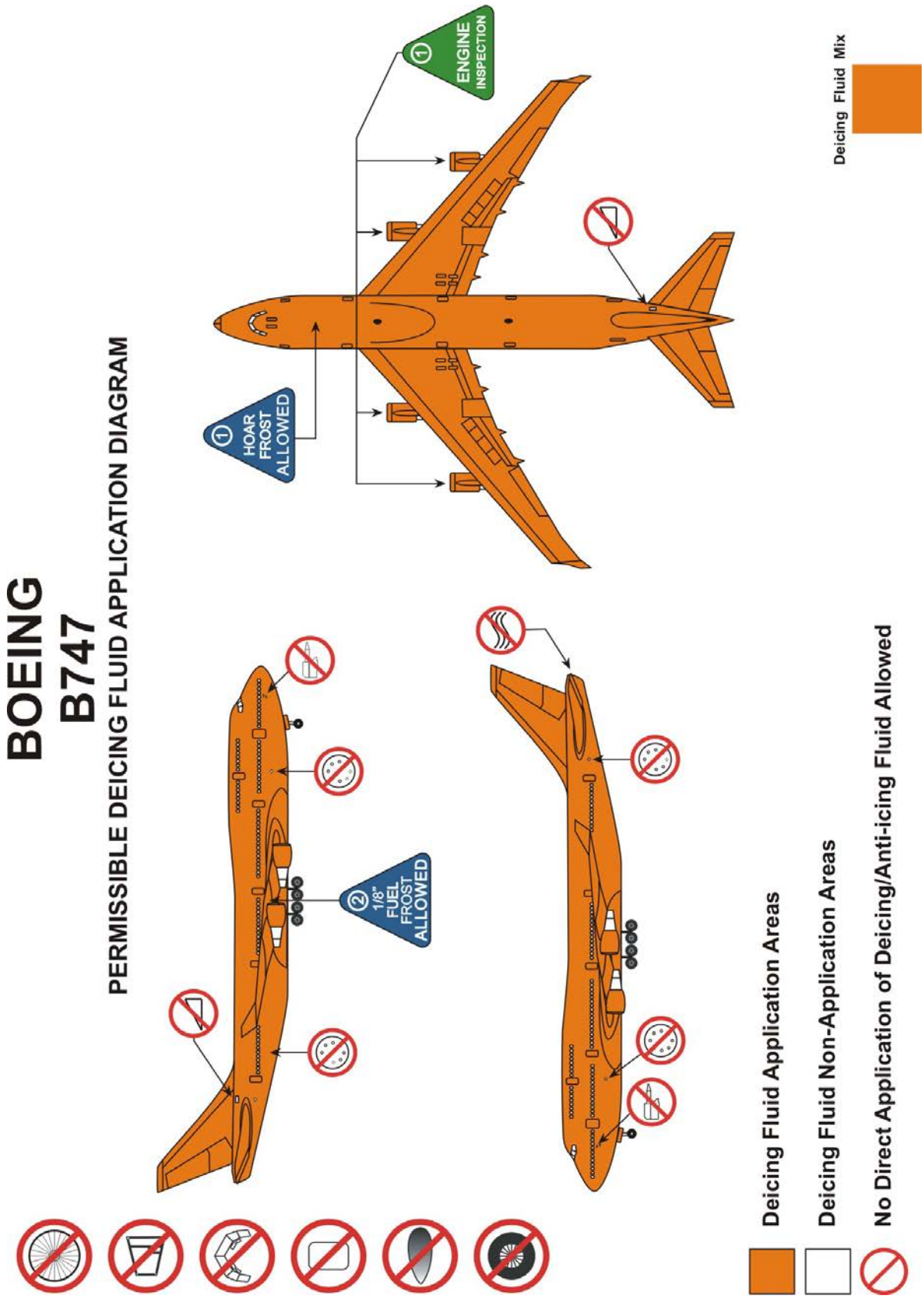
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

BOEING B737

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub

3.1.19 Boeing B747



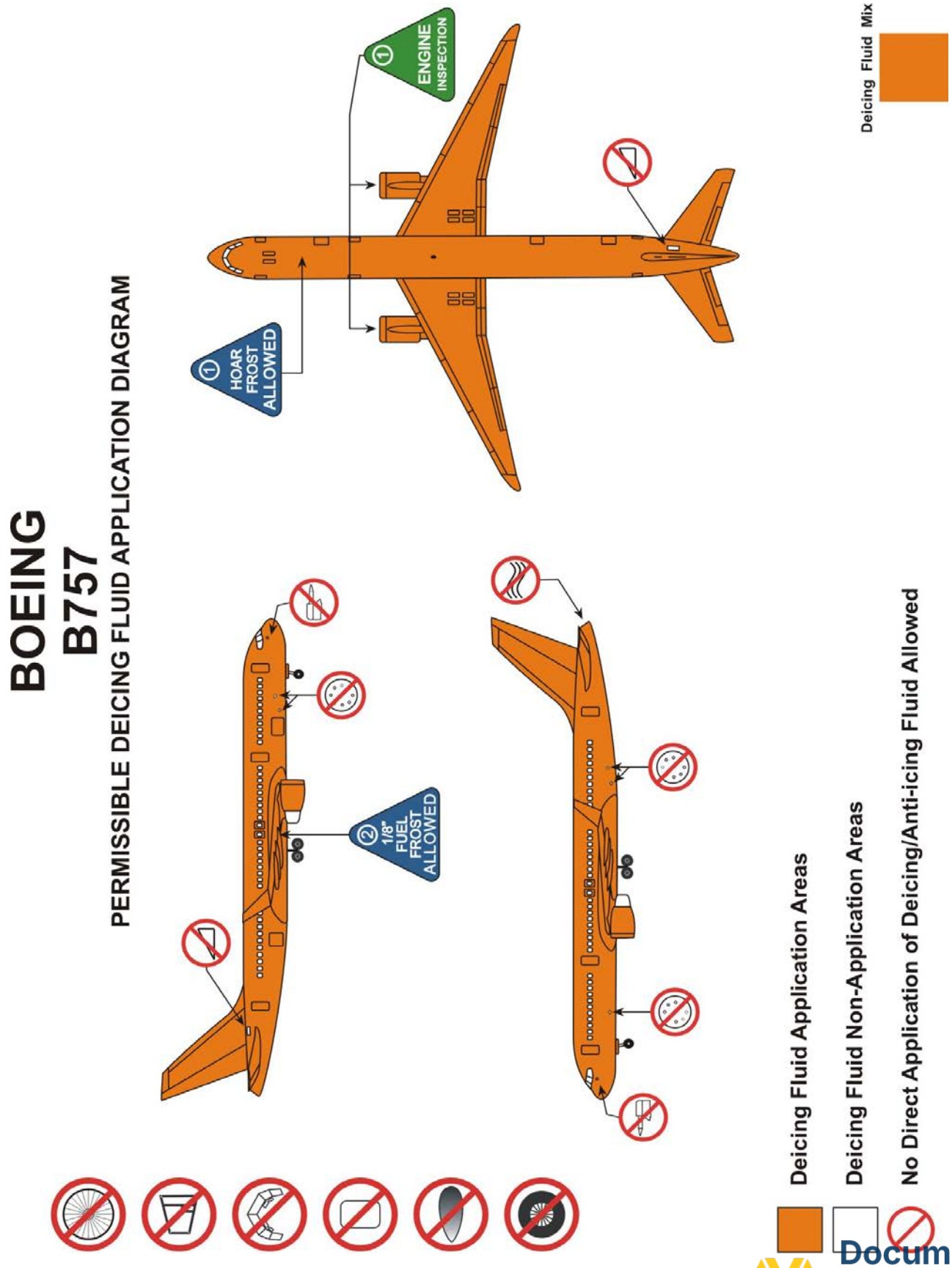
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

BOEING B747

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub

3.1.20 Boeing B757



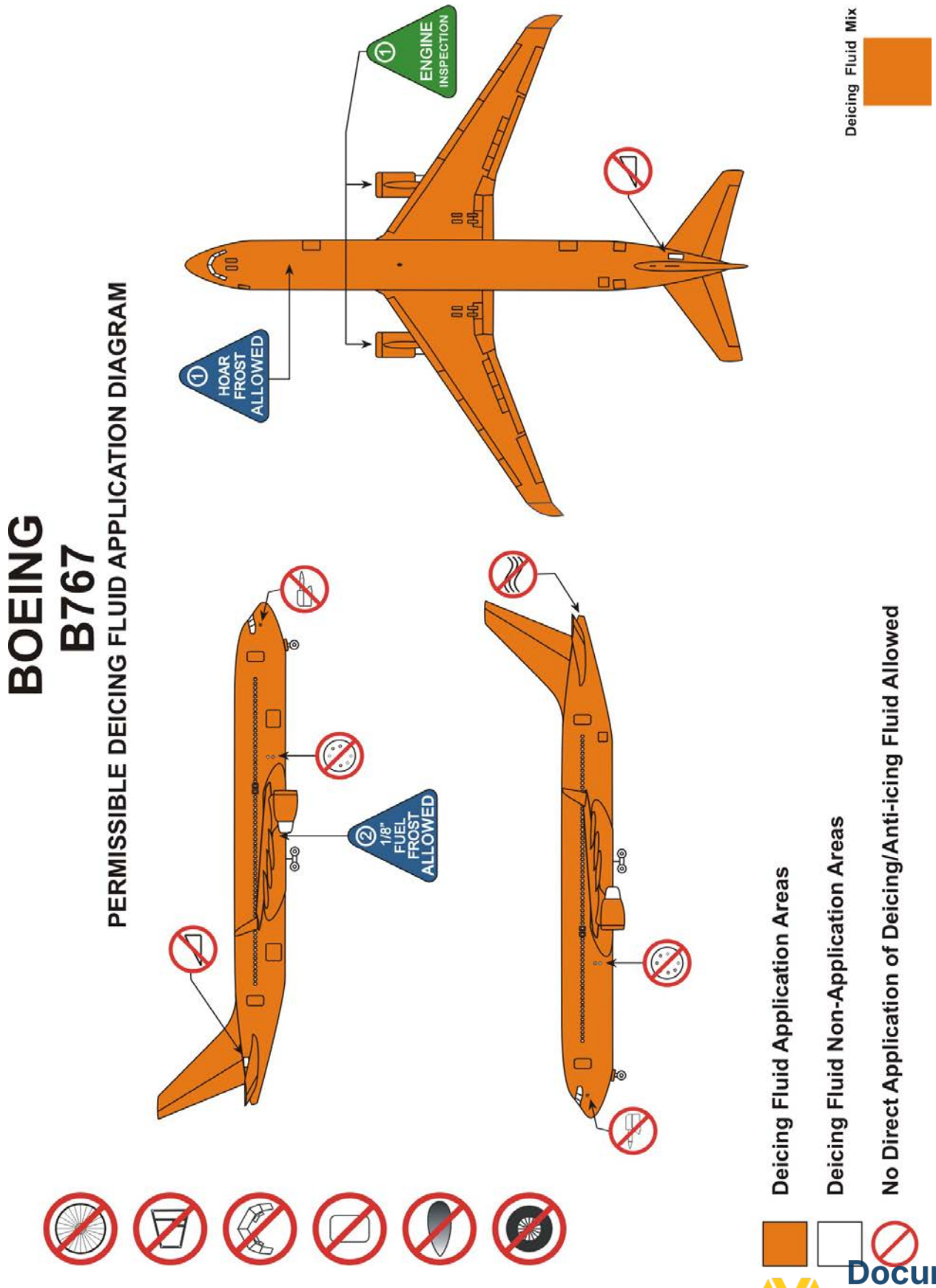
Documents
Document Sharing Hub

BOEING B757

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub

3.1.21 Boeing B767



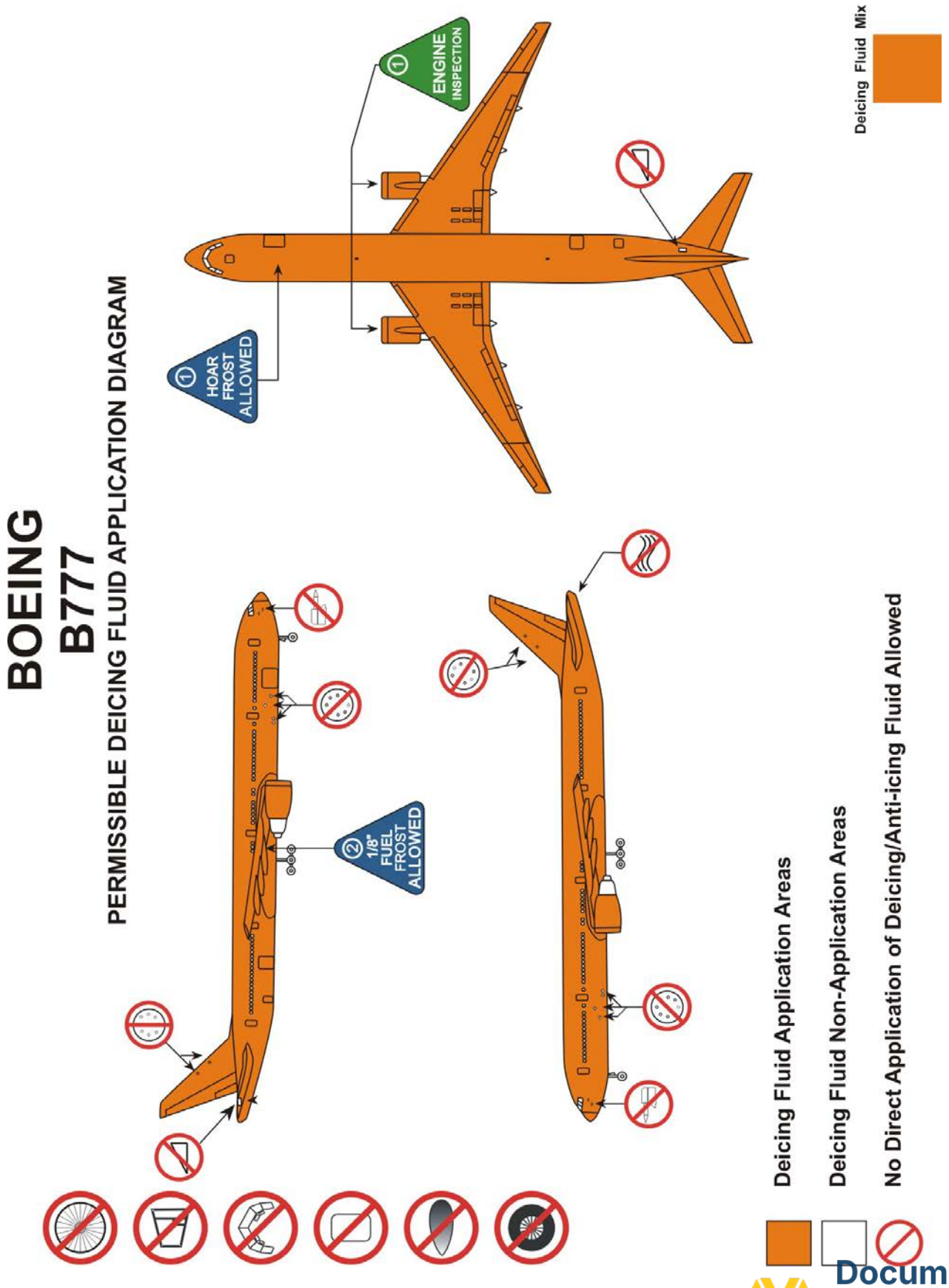
Documents
Document Sharing Hub
Full document details: SAE AS6286_6A

BOEING B767

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub

3.1.22 Boeing B777



Documents
Document Sharing Hub

BOEING B777

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

Documents
Document Sharing Hub
Full document details: SAE AS6286_6A