

International De/Anti-icing Quality Control Section

DEVA Checklist

De/Anti-icing International Vendor Audit Checklist For companies providing Deicing/Anti-icing Services and performing the Post Deicing/Anti-icing Check

Station Name:

Completion Date:

(Dd-mmm-yyyy)

Type of check: Initial Annual Follow up Other:

Handling company performing de/anti-icing

Name of company :

Type of company:

Airline Ground Handling Other (specify):

Findings (for details see checklist and findings summary on last page):

No findings	Minor findings	Safety related findings <i>Alert letter to pool members is required. Follow-up inspection to be decided by auditor/ inspector.</i>
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Repeated Findings: Yes No

Restrictions: Yes No

(Specify if yes)

Corrective measures required prior to deicing/anti-icing operation: Yes No

Follow-up audit required prior to deicing/anti-icing operation: Yes No

Signature:

Date:

International De/Anti-icing Quality Control Section

A. Contact Addresses:

Official Company Name:

Responsible Manager:

Department:

Phone:

Mobile:

Street:

Fax:

Zip-Code, City:

SITA Telex:

Country:

E-Mail:

Contact Person:

Same data as above: Yes No

Fill in any data that is different from above

Department:

Phone:

Mobile:

Street:

Fax:

Zip-Code, City:

SITA Telex:

Country:

E-Mail:

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B. Fluids

List all deicing/anti-icing fluids likely to be used on aircraft by the previously named Handling Company.

Deicing / Anti-icing Fluids		Fluid Type			
Manufacturer	Brand Name	I	II	III	IV

C. Miscellaneous

<p>Discrepancies noted at the previous Winter-inspection have been corrected and reported by the handling company?</p> <p><u>Note:</u> Not applicable for initial inspection.</p>	<p>Yes</p> <p>No (report the reason under comments)</p> <p>No discrepancies reported at previous inspection.</p>
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D. STATION CHECKLIST -

For companies providing **Deicing/Anti-icing Services** and performing the **Post Deicing/Anti-icing Check**

Complete the following Audit Checklist during each winter period.

Questions must be answered with Y (yes), N (no), NA (not applicable), or if unsatisfactory with X (for findings). Comments can be added to the answers if necessary.

Questions which are marked "For information only" must be answered with "Y" or "N", or "NA". Certain other items call for specific values to be recorded.

All questions which are not marked with "For information only" must be answered with "Y", "X" or "NA". ("N" is not permissible!).

Note:

All referenced documents in checklist (e.g. AEA, SAE, and ISO) are subject to revision. Always use the latest edition.

Answers marked with an asterisk (*) are safety related.

No	Questions	X	Y	N	NA	Comments
PR	Procedures and Documentation					
1.	<p><i>(For information only)</i></p> <p>Are Deicing/Anti-icing procedure manuals available from any Part 121 operating carriers. If yes, list airlines, manual name and revision status:</p>					
2.	<p><i>(For information only)</i></p> <p>Does the handling company have its own deicing /anti-icing procedures? If yes, specify manual name and revision status:</p>					
3.	<p><i>(Safety related)</i></p> <p>Are the procedures used by the handling company based on the approved Company manual?</p>	*				

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No	Questions	X	Y	N	NA	Comments
FL	Deicing/Anti-icing Fluids					
1.	Are fluid release documents (Certificate of Conformance or equivalent) received from the fluid manufacturer for each fluid delivery/batch and retained by the consignee for inspection, as necessary?					
2.	Are fluid delivery checks (incoming inspection) performed and records retained?					
3.	Are concentration checks (refractive index checks) on equipment carried out prior to first use of the day and after each refilling on fluids? Are results recorded and is the information available to operators? <u>Note:</u> For details and exceptions, refer to the International Chapter (13.2.1.1)					
4.	<u>(Safety related)</u> Are fluid laboratory checks carried out periodically on fluid samples (Type II, III, and IV fluids), the result recorded and is the information available to operators? <u>Note:</u> Fluid laboratory checks shall be performed at the start of the winter season. Fluid samples shall be taken from all deicing / anti - vehicle spraying nozzles of all vehicles and from all storage tanks.	*				
5.	Does the handling company apply an acceptable procedure for fluid sampling and is this procedure documented?					

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No	Questions	X	Y	N	NA	Comments																																				
TR	Training and Qualification																																									
1.	(Safety related) Do the personnel carrying out the <u>deicing/anti-icing operation</u> receive training in cold weather operations?	*																																								
2.	(Safety related) Do the personnel carrying out the <u>Post Deicing/Anti-icing Check</u> receive training in cold weather operations?	*																																								
3.	(Safety related) Are the training materials used by the handling company based on the approved Company Manual?	*																																								
4.	(Safety related) Do all personnel mentioned in TR 1 and TR 2 receive annual refresher training?	*																																								
5.	Are training records and authorizations maintained?																																									
6.	(Safety related) Is the success of the training evaluated? <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><u>Basic Training</u></td> <td style="width: 50%;"><u>Refresher Training</u></td> </tr> <tr> <td>Theoretical Test</td> <td>Theoretical Test</td> </tr> <tr> <td>Practical Assessment</td> <td>Practical Assessment</td> </tr> </table> <u>Note:</u> Practical assessment is optional for the personnel performing the Post-Deicing/Anti-icing Check.	<u>Basic Training</u>	<u>Refresher Training</u>	Theoretical Test	Theoretical Test	Practical Assessment	Practical Assessment	*																																		
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7.	Are passing rates established and documented (min. 75%)? Specify procedure reference:																																									
8.	Place a check mark for all fleet types that are trained: <table style="width: 100%; border: none;"> <tr> <td>ATR-72</td> <td>A-300</td> <td>A-310</td> <td>A-318</td> </tr> <tr> <td>A-319</td> <td>A-320</td> <td>A-321</td> <td>A-330</td> </tr> <tr> <td>A-340</td> <td>A-380</td> <td>B-1900</td> <td>B-727</td> </tr> <tr> <td>B-737</td> <td>B-747</td> <td>B-757</td> <td>B-767</td> </tr> <tr> <td>B-777</td> <td>B-787</td> <td>MD-11</td> <td>DH-8</td> </tr> <tr> <td>BEA146</td> <td>E-135/145</td> <td>E-170</td> <td>Dor-328</td> </tr> <tr> <td>Falcon</td> <td>F-100</td> <td>Glfsrm</td> <td>Learjet</td> </tr> <tr> <td>Jet-31/41</td> <td>DC-8</td> <td>DC-9</td> <td>DC-10</td> </tr> <tr> <td>CRJ/CL65</td> <td>Saab-340</td> <td>Shorts-360</td> <td></td> </tr> </table>	ATR-72	A-300	A-310	A-318	A-319	A-320	A-321	A-330	A-340	A-380	B-1900	B-727	B-737	B-747	B-757	B-767	B-777	B-787	MD-11	DH-8	BEA146	E-135/145	E-170	Dor-328	Falcon	F-100	Glfsrm	Learjet	Jet-31/41	DC-8	DC-9	DC-10	CRJ/CL65	Saab-340	Shorts-360						
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No	Questions	X	Y	N	NA	Comments
S V	Post Deicing/Anti-icing Check and transmission of the Anti-Icing Code to the Captain					
1.	<p><u>(Safety related)</u> Are the responsibilities for the Post Deicing/Anti-icing Check in compliance with the Company Manual?</p> <p>Specify location if documented in handling company manual</p>	*				
2.	<p><u>(Safety related)</u> Are communication between flight crew and the deicing/anti-icing company in compliance with the Company Manual?</p> <p>Specify location if documented in handling company manual</p>	*				
3.	<p><u>(Safety related)</u> Are written procedures established for the communication between the staff performing the deicing/anti-icing and the staff performing the Post Deicing/Anti-icing Check?</p> <p>Performance of Deicing/Anti-Icing Check is done by the same person.</p> <p>Specify procedure reference:</p> <p><u>Note:</u> Comment mandatory if not applicable.</p>	*				
4.	<p><u>(Safety related)</u> Where necessary, does the person performing the Post Deicing/Anti-icing Check, have (access to) equipment offering sufficient visibility of the aircraft critical parts to be checked.</p> <p>Comments are mandatory. Use comment box on last page to specify details.</p>	*				

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No	Questions	X	Y	N	NA	Comments																
EQ	Deicing/Anti-icing Equipment I																					
1.	<p><u>(For information only)</u> Specified vehicles of each separate type/modification state: Manufacturer: Model: Total number of vehicles of this model:</p> <table border="1"> <tr> <td></td> <td>Tank 1</td> <td>Tank 2</td> <td>Tank 3</td> </tr> <tr> <td>Fluid Type:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Concentr:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Temp. °C:</td> <td></td> <td></td> <td></td> </tr> </table> <p>Fluid Temp.(°C) at nozzle if available:</p>		Tank 1	Tank 2	Tank 3	Fluid Type:				Concentr:				Temp. °C:								
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2.	<p><u>(Safety related)</u> Applicable for anti-icing with Type I Fluid only:</p> <p>Is the temperature of the heated fluids and fluid mixtures at or above 60 °C (140 °F) at the nozzle?</p>	*																				
3.	<p>If the answer to question EQ 2 is “N/A”, this question is optional. If the answer to question EQ 2 is “Y” or “N”, this question is mandatory.</p> <p><u>(For information only)</u> How is ensured that the temperature of the heated fluids and fluid mixtures is <u>at or above</u> 60 °C (140 °F) at the nozzle?</p> <p>a temperature sensor (e. g. a thermometer) is installed at or near the nozzle</p> <p>the temperature of fluid water/mixtures in the tank and at the nozzle is measured and recorded several times during the season and both temperature readings are correlated</p> <p>other (please explain on comment page)</p>																					
4.	<p>Are vehicle tanks / filling ports labelled for fluid type and/or mixture rate?</p>																					
5.	<p><u>(For information only)</u> How is fluid mixed?</p> <p>By vehicle proportional mix system</p> <p>Manually in vehicle</p> <p>In storage facilities</p> <p>Premix from manufacturer</p>																					

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No	Questions	X	Y	N	NA	Comments
EQ	Deicing/Anti-icing Equipment I (continued)					
6.	<p><u>(Safety related)</u></p> <p>Perform a refractive index check during the audit on vehicles selected for fluid sampling. Measure refractive index of undiluted fluids (Type II, III, and IV) and/or fluid/water mixtures normally used (Type I, III, II and IV).</p> <p>Is the refractive index of samples taken from undiluted fluids and fluid/water mixtures within the required limit?</p>	*				
7.	<p><u>(Safety related)</u></p> <p>Can Type II, III, or IV fluid (undiluted or hot mix) be sprayed without degrading the fluid beyond required limits? (Refer to question FL 4)</p>	*				
8.	<p>Can the deicing fluid spray reach all appropriate parts of the aircraft and can the boom reach sufficient height so that the operator can directly see the area being deiced, such as over the T-tail? Indicate maximum size/category of aircraft that can be de-iced/anti-iced:</p>					
9.	<p>Are spraying nozzles and/or fluid selection switches/panels as appropriate, properly marked with mixture rate and/or fluid type, when more than one nozzle is installed?</p>					
10.	<p>Does the vehicle have a two-way communication system between basket and driver cabin?</p>					
11.	<p><u>(Safety related)</u></p> <p>Are the vehicles free of discrepancies, which could affect the safe operation (e.g. flat tires, defective lighting system, defective boom, etc.)?</p>	*				
12.	<p>Are vehicles maintained to a maintenance schedule, the results recorded and is the information available to operators?</p>					
13.	<p>If fluid is mixed by vehicle proportional mixing-system: Is the mixing-system checked according to a maintenance schedule and are the check records maintained? What is the check interval:</p>					

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No	Questions	X	Y	N	NA	Comments																
EQ	Deicing/Anti-icing Equipment II																					
1.	<p><u>(For information only)</u> Specified vehicles of each separate type/modification state:</p> <p>Manufacturer:</p> <p>Model:</p> <p>Total number of vehicles of this model:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;">Tank 1</td> <td style="width: 20%;">Tank 2</td> <td style="width: 20%;">Tank 3</td> </tr> <tr> <td>Fluid Type:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Concentr:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Temp. °C:</td> <td></td> <td></td> <td></td> </tr> </table> <p>Fluid Temp.(°C) at nozzle if available:</p>		Tank 1	Tank 2	Tank 3	Fluid Type:				Concentr:				Temp. °C:								
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2.	<p><u>(Safety related)</u> Applicable for anti-icing with Type I Fluid only:</p> <p>Is the temperature of the heated fluids and fluid mixtures at or above 60 °C (140 °F) at the nozzle?</p>	*																				
3.	<p>If the answer to question EQ 2 is “N/A”, this question is optional. If the answer to question EQ 2 is “Y” or “N”, this question is mandatory.</p> <p><u>(For information only)</u> How is ensured that the temperature of the heated fluids and fluid mixtures is <u>at or above</u> 60 °C (140 °F) at the nozzle?</p> <p style="padding-left: 20px;">a temperature sensor (e. g. a thermometer) is installed at or near the nozzle</p> <p style="padding-left: 20px;">the temperature of fluid water/mixtures in the tank and at the nozzle is measured and recorded several times during the season and both temperature readings are correlated other (please explain on comment page)</p>																					
4.	<p>Are vehicle tanks / filling ports labelled for fluid type and/or mixture rate?</p>																					
5.	<p><u>(For information only)</u> How is fluid mixed?</p> <p style="padding-left: 20px;">By vehicle proportional mix system</p> <p style="padding-left: 20px;">Manually in vehicle</p> <p style="padding-left: 20px;">In storage facilities</p> <p style="padding-left: 20px;">Premix from manufacturer</p>																					

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No	Questions	X	Y	N	NA	Comments
EQ	Deicing/Anti-icing Equipment II (continued)					
6.	<p><u>(Safety related)</u></p> <p>Perform a refractive index check during the audit on vehicles selected for fluid sampling. Measure refractive index of undiluted fluids (Type II, III, and IV) and/or fluid/water mixtures normally used (Type I, III, II and IV).</p> <p>Is the refractive index of samples taken from undiluted fluids and fluid/water mixtures within the required limit?</p>	*				
7.	<p><u>(Safety related)</u></p> <p>Can Type II, III, or IV fluid (undiluted or hot mix) be sprayed without degrading the fluid beyond required limits? (Refer to question FL 4)</p>	*				
8.	<p>Can the deicing fluid spray reach all appropriate parts of the aircraft? Indicate maximum size/category of aircraft that can be de-iced/anti-iced:</p>					
9.	<p>Are spraying nozzles and/or fluid selection switches/panels as appropriate, properly marked with mixture rate and/or fluid type, when more than one nozzle is installed?</p>					
10.	<p>Does the vehicle have a two-way communication system between basket and driver cabin?</p>					
11.	<p><u>(Safety related)</u></p> <p>Are the vehicles free of discrepancies, which could affect the safe operation (e.g. flat tires, defective lighting system, defective boom, etc.)?</p>	*				
12.	<p>Are vehicles maintained to a maintenance schedule, the results recorded and is the information available to operators?</p>					
13.	<p>If fluid is mixed by vehicle proportional mixing-system: Is the mixing-system checked according to a maintenance schedule and are the check records maintained?</p> <p>What is the check interval:</p>					

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No	Questions	X	Y	N	NA	Comments																
EQ	Deicing/Anti-icing Equipment III																					
1.	<p><u>(For information only)</u> Specified vehicles of each separate type/modification state:</p> <p>Manufacturer:</p> <p>Model:</p> <p>Total number of vehicles of this model:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td>Tank 1</td> <td>Tank 2</td> <td>Tank 3</td> </tr> <tr> <td>Fluid Type:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Concentr:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Temp. °C:</td> <td></td> <td></td> <td></td> </tr> </table> <p>Fluid Temp.(°C) at nozzle if available:</p>		Tank 1	Tank 2	Tank 3	Fluid Type:				Concentr:				Temp. °C:								
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3.	<p>If the answer to question EQ 2 is “N/A”, this question is optional. If the answer to question EQ 2 is “Y” or “N”, this question is mandatory.</p> <p><u>(For information only)</u> How is ensured that the temperature of the heated fluids and fluid mixtures is <u>at or above</u> 60 °C (140 °F) at the nozzle?</p> <p>a) a temperature sensor (e. g. a thermometer) is installed at or near the nozzle;</p> <p>b) the temperature of fluid water/mixtures in the tank and at the nozzle is measured and recorded several times during the season and both temperature readings are correlated</p> <p>c) other (please explain on comment page)</p>																					
4.	Are vehicle tanks / filling ports labelled for fluid type and/or mixture rate?																					
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No	Questions	X	Y	N	NA	Comments
EQ	Deicing/Anti-icing Equipment III (continued)					
6.	<p><u>(Safety related)</u></p> <p>Perform a refractive index check during the audit on vehicles selected for fluid sampling. Measure refractive index of undiluted fluids (Type II, III, and IV) and/or fluid/water mixtures normally used (Type I, III, II and IV).</p> <p>Is the refractive index of samples taken from undiluted fluids and fluid/water mixtures within the required limit?</p>	*				
7.	<p><u>(Safety related)</u></p> <p>Can Type II, III, or IV fluid (undiluted or hot mix) be sprayed without degrading the fluid beyond required limits? (Refer to question FL 4)</p>	*				
8.	<p>Can the deicing fluid spray reach all appropriate parts of the aircraft? Indicate maximum size/category of aircraft that can be de-iced/anti-iced:</p>					
9.	<p>Are spraying nozzles and/or fluid selection switches/panels as appropriate, properly marked with mixture rate and/or fluid type, when more than one nozzle is installed?</p>					
10.	<p>Does the vehicle have a two-way communication system between basket and driver cabin?</p>					
11.	<p><u>(Safety related)</u></p> <p>Are the vehicles free of discrepancies, which could affect the safe operation (e.g. flat tires, defective lighting system, defective boom, etc.)?</p>	*				
12.	<p>Are vehicles maintained to a maintenance schedule, the results recorded and is the information available to operators?</p>					
13.	<p>If fluid is mixed by vehicle proportional mixing-system: Is the mixing-system checked according to a maintenance schedule and are the check records maintained?</p> <p>What is the check interval:</p>					

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Comments

FINDINGS Summary (Request remedial actions for findings by a B-Letter)

Q-No.	Findings description

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