AIRWORTHINESS NOTICE

NOTICE 6406

Issue 1
15 July 2019

AIRCRAFT GROUND DE-ICING AND ANTI-ICING

IN exercise of the powers conferred by section 24O of the Civil Aviation Act 1969 [Act 3], the Chief Executive Officer makes this Airworthiness Notice ("Notice") – Aircraft Ground De-icing And Anti-icing.

This Notice provides the procedures and requirements pertaining to the de-icing and anti-icing and for any matters connected therewith.

This Notice is published by the Chief Executive Officer under section 24O of the Civil Aviation Act 1969 [Act 3] and come into operation on 15th July 2019.

Non-compliance with this Notice

Any person who contravenes any provision in this Notice commits an offence and shall on conviction be liable to the punishment under section 24O of the Civil Aviation Act 1969 [Act 3].

(Ahmad Nizar Zolfakar)
Chief Executive Officer
Civil Aviation Authority of Malaysia
15th July 2019
1.0 CITATION

1.1 This Notice may be cited as the Airworthiness Notice – Aircraft Ground De-Icing and Anti-Icing [Notice 6406].

2.0 APPLICATION

This Notice shall apply to an operator of a Malaysian registered aircraft planned or expected to operate in suspected or known ground icing conditions.

3.0 INTERPRETATION

In this Notice, unless the context otherwise requires—

“Authority” means Civil Aviation Authority of Malaysia;

“anti-icing” means a precautionary procedure by which clean aircraft surfaces are protected against the formation of ice and frost and the accumulation of snow and slush for a limited period of time;

“critical surfaces” means the critical surfaces which is determined by the aircraft manufacturer and may include wings, control surfaces, propellers, horizontal stabilizers, vertical stabilizers or any other stabilizing surface on an aircraft;

“de-icing” means the process that removes ice, snow, slush or frost from aircraft surfaces;

“de-icing/anti-icing” means a procedure combining both the de-icing and the anti-icing and that can be performed in one or two steps;

“drizzle” means fairly uniform precipitation composed exclusively of fine drops (diameter less than 0.5 mm (0.02 in)) very close together where drizzle appears to float while following air currents although, unlike fog droplets, drizzle falls to the ground;

“frost” means a deposit of small, white ice crystals formed on the ground or other surfaces where frost is formed by sublimation when water vapor is deposited upon a surface whose temperature is at or below freezing;

“ground de-icing/anti-icing programme” means a programme as approved by the Authority under paragraph 4.0 of this Notice;

“operator” has the same meaning assigned to it under the Civil Aviation Regulations 2016;

“precipitation intensity” means the indication of the amount of precipitation collected per unit time interval where intensity is defined according to the type of precipitation
occurring, based either on rate of fall for rain and ice pellets or visibility for snow and drizzle;

“slush” means water-saturated snow that will be displaced with a splatter by a heel-and-toe slap-down motion against the ground; and

“snow” means precipitation of ice crystals, mostly branched in the form of six-pointed stars where the crystals are isolated or agglomerated to form snowflakes.

4.0 GROUND DE-ICING/ANTI-ICING PROGRAMME

4.1 Operator shall have a ground de-icing/anti-icing programme to comply with the clean aircraft concept (‘CAC’).

4.2 Operator shall submit the ground de-icing/anti-icing programme to the Authority for its approval.

4.3 Operator shall comply with the ground de-icing/anti-icing programme as approved by the Authority.

4.4 For the purpose of paragraph 4.1, CAC means a concept where an aircraft is considered to be clean when all surfaces are completely clean or when all surfaces are protected by de-icing and anti-icing fluid and the surface aerodynamic characteristics are unaffected.

4.5 Operator shall ensure the ground de-icing/anti-icing programme contains the following information—

(a) establish a management plan to coordinate and implement the approved ground de-icing/anti-icing programme and the plan shall include guidance for responsibility, implementation, use and update of manuals and coordination;

(b) specify aircraft-specific procedures for each type of aircraft serviced in the ground de-icing/anti-icing programme and ground personnel are required to undertake specific training for each aircraft with unique design characteristics;

(c) specify procedures to prevent, detect and remove residues of dried fluid;

(d) specify inspection intervals as specified by the manufacturer or operator’s experience;

(e) explain the CAC which includes the critical surfaces of the aircraft and list those surfaces that need to be checked prior to take-off;

(f) provision of training and qualification for ground personnel and maintenance personnel where the training programme shall have a quality assurance (QA) system and a tracking system for records;

(g) Description of the fluids, equipment and operating measures and includes how fluids are tested, stored, used and contained, describe equipment available for operations, and what the operator must know when testing, inspecting and operating the equipment safely, the maintenance crew and ground de-icing crew shall be aware of the multiple measures that can be used to minimize and
remove frozen contamination accretion while on the ground and methods to protect cleaned surfaces;

(h) develop an emergency response plan (ERP) in case of an emergency occurs during the de-icing/anti-icing process and a means to communicate during the emergency between parties involved;

(i) establish a reporting system to ensure the quality of the programme and to explain the reporting structure within the organization; and

(j) to establish a de-icing/anti-icing oversight programme which includes as follows:

(i) to conduct inspection on any person engaged by the operator who provide the de-icing and anti-icing services;

(ii) to conduct audit on all parts of the de-icing/anti-icing operation (required to check the ongoing compliance with all regulations issued by authorities and conformity with procedures and specifications of air operators, manufacturers and handling agents);

(iii) to train all personnel involved in the de-icing/anti-icing services and ensure the personnel is qualified;

(iv) to define and document methods and procedures (to guide personnel in the clear and safe accomplishment of all the tasks that are necessary for de-icing/anti-icing an aircraft);

(v) to document training records of all de-icing/anti-icing personnel (to ensure that all training and skill requirements are fulfilled);

(vi) to publish documents required for the aircraft de-icing/anti-icing operation (to ensure the correct accomplishment of all tasks);

(vii) to maintain equipment in such a way that quality operation is ensured; and

(viii) handle fluids in such a way that fluid quality is ensured.

5.0 ROLES AND RESPONSIBILITIES

Operator shall—

(a) ensure the aircraft surface is examined before take-off when there are ice or snow conditions;

(b) ensure inspection to detect and removal of de-icing and anti-icing fluid residues be carried out by approved maintenance organization;

(c) ensure journey log book contain details of provision for the time when ground de-icing and/or anti-icing was started and the type of fluid applied, including mixture ratio fluid/water and any other information required by the operator's procedures in order to allow the assessment on whether inspections for and/or
elimination of de-icing/anti-icing fluid residues that could endanger flight safety are required;

(d) ensure the person who conduct the de-icing and anti-icing services are qualified and trained in accordance with the ground de-icing/anti-icing programme;

(e) ensure the de-icing and anti-icing services are provided in the location as specified in the ground de-icing/anti-icing programme; and

(f) conduct quality inspection or cause to conduct quality inspection against the person who provide the de-icing and anti-icing services;