

# AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE

*Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.*

Translation of 'Consigne de Navigabilité' ref. : 1996-208-067(B) R1  
In case of any difficulty, reference should be made to the French original issue.

## AEROSPATIALE

### ATR 42 Aircraft

De-icing procedures and protections improvements (ATA 30)

This Airworthiness Directive applies to all model ATR 42 series airplanes.

To minimize the potential hazards associated with operating the airplane in severe icing conditions by providing more clearly defined procedures and limitations associated with such conditions, the following measures are rendered mandatory on the effective date of this Airworthiness Directive :

1. Within 30 days after the effective date of the present Airworthiness Directive, revise the DGAC Approved Airplane Flight Manual by incorporating the following.

**Note :** This may be accomplished by inserting a copy of this AD in the AFM.

#### **1.1. Into the Limitations Section of the AFM :**

- **FLAPS : Holding with any flaps extended is prohibited in icing conditions (except for single engine operations).**
- **ICING CONDITIONS.**

### **WARNING**

Severe icing may result from environmental conditions outside of those for which the airplane is certificated. Flight in freezing rain, freezing drizzle, or mixed icing conditions (supercooled liquid water and ice crystals) may result in ice build-up on protected surfaces exceeding the capability of the ice protection system, or may result in ice forming aft of the protected surfaces. This ice may not be shed using the ice protection systems, and may seriously degrade the performance and controllability of the airplane.

- During flight, severe icing conditions that exceed those for which the airplane is certificated shall be determined by the following visual cue. If the following visual cue exists, immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the icing conditions.

- Severe icing is characterized by ice covering all or a substantial part of the unheated portion of either forward side window, possibly associated with water splashing and streaming on the windshield

- Since the autopilot may mask tactile cues that indicate adverse changes in handling characteristics, use of the autopilot is prohibited when the visual cue specified above exists, or when unusual lateral trim requirements or autopilot trim warnings are encountered while the airplane is in icing conditions.
- All icing detection lights must be operative prior to flight into icing conditions at night. (Note : this supersedes any relief provided by the Master Minimum Equipment List (MMEL)).
- The ice detector must be operative for flight into icing conditions.

#### 1.2. Into the Procedures Section of the AFM :

##### **THE FOLLOWING MAY BE USED AS SECONDARY INDICATIONS OF SEVERE ICING CONDITIONS**

- Unusually extensive ice accreted on the airframe in areas not normally observed to collect ice.
- Accumulation of ice on the lower surface of the wing aft of the protected area.
- Accumulation of ice on the propeller spinner farther aft than normally observed.

##### **THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCTIVE TO SEVERE IN-FLIGHT ICING :**

- Visible rain at temperatures close to 0 degrees Celsius ambient air temperature.
- Droplets that splash or splatter on impact at temperatures close to 0 degrees Celsius ambient air temperature.

##### **PROCEDURES FOR EXITING THE SEVERE ICING ENVIRONMENT :**

These procedures are applicable to all flight phases from takeoff to landing. Monitor the ambient air temperature.

While severe icing may form at temperatures as cold as - 18 degrees Celsius, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cue specified in the Limitations Section of the AFM for identifying severe icing conditions is observed, accomplish the following :

- Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the airplane has been certificated.
- Avoid abrupt and excessive manoeuvring that may exacerbate control difficulties.
- Do not engage the autopilot.
- If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack.
- If the flaps are extended, do not retract them until the airframe is clear of ice.
- Report these weather conditions to Air Traffic Control.

2. Before December 31, 1996 install the extended boots by applying Aerospatiale Modification n° 4222 in accordance with ATR Service Bulletin n° 42-57-0043.

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The present Airworthiness Directive replaces AD 95-142-062(B) dated July 5, 1995.

This Revision 1 replaces AD 96-208-067(B) dated October 09, 1996.

Compliance with paragraph 1.1 and 1.2 of the present AD can also be accomplished by compliance with AD 1999-014-076(B) at revision 1 or any further revision.

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Ref. : ATR Service Bulletin 42-57-0043 revision 1 dated April 10, 1995  
(or any further approved revision.)

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**EFFECTIVE DATES :**

**Original AD : OCTOBER 19, 1996**

**Revision 1 : MAY 1<sup>st</sup>, 1999**