



# Backgrounder: Safety of Small Aircraft Flying Across the North Atlantic

Hundreds of private and commercial aircraft fly safely across the North Atlantic every day. For many modern aircraft, the journey is considered normal operation.

With its strong winds and icing conditions however, the North Atlantic can be a challenging environment for light and small aircraft. This is particularly true for single engine aircraft, or multi-engine aircraft that would be unable to fly should one of its engines fail, or when an additional fuel tank must be installed to provide sufficient fuel capacity for the aircraft to reach its destination. This is also often the case with ferry flights, which are primarily new or newly purchased small aircraft travelling from the United States or Canada to new owners overseas.

Transport Canada has regulations and programs in place that promote the safety of light and small aircraft flying across the North Atlantic.

## Checklist of Specific Safety Requirements

Any aircraft leaving Canadian domestic airspace and entering airspace over the high seas, including the North Atlantic, must meet specific safety requirements. Amongst other requirements, a single engine aircraft or a twin-engine aircraft that cannot maintain flight with one engine must meet the following conditions:

- The pilot in command must hold a pilot license endorsed in an Instrument Rating.
- The aircraft must be equipped with the required instruments for flight in Instrument Flight Rules (IFR) conditions.
- The aircraft must be equipped with, or have on board, a high frequency radio.
- The aircraft must carry adequate survival equipment such as a survival suit, a life raft, flares and other safety equipment as identified in the regulations.
- The aircraft must be equipped with an appropriate Emergency Locator Transmitter (ELT).
- The aircraft must carry enough fuel to get to its planned destination and must have an additional 10 per cent contingency reserve

## Special Flight Permits

Aircraft that are flying on a standard Certificate of Airworthiness and have the fuel capacity to fly to their destination are not required to obtain any special authorizations from Transport Canada to fly over the North Atlantic. This is considered normal operation of an aircraft. There are many

ongoing procedures in place to ensure the safety of these flights, such as licensing requirements for pilots, airworthiness certification requirements for aircraft, and air navigation services, etc.

Canadian aircraft equipped with an additional fuel tank require a special flight permit from Transport Canada to fly over the North Atlantic. This is often necessary to allow a ferry flight to carry sufficient fuel to reach its destination.

To obtain this permit, the owner must demonstrate to Transport Canada that the ferry fuel tank system has been installed according to safety standards by an authorized maintenance organization, and that the weight of the aircraft does not exceed the manufacturer's recommended allowable limits for ferry flights.

The permit limits the flight to specific departure and arrival points, specifies maximum allowable weight, and includes restrictions on air speed and manoeuvring. There are provisions in place to prevent aircraft with special flight permits from departing over more densely populated areas, specifically at St. John's and Gander airports in Newfoundland and Labrador.

When the aircraft is registered in the United States, the Federal Aviation Administration will issue the special flight permit after similar requirements are met. Transport Canada must validate the flight permit before the aircraft is allowed to fly in Canadian airspace.

### **Education and awareness activities**

Transport Canada recommends that pilots obtain adequate training before embarking on a North Atlantic flight, for which safety courses are specifically available. Pilots are also encouraged to consult the *North Atlantic International Operations Manual*, which provides information on flight planning and operations over the North Atlantic.

Transport Canada promotes safe practices for flying across the North Atlantic through regular letter writing campaigns to aircraft manufacturers, ferry flight operators and individual pilots. A safety promotion poster is being developed to promote safety awareness for specific target groups.

December 2006

**World Air Ops** provides Airlines, Aircraft Operators, and Pilots around the World with Operational Support, Flight Planning, Ferry Flights, and Aircraft Deliveries.

You may be interested to view **other documents** in our Free Resource Library - organised by region:

North Atlantic	<a href="#">NAT</a>
Africa	<a href="#">AFI</a>
Europe	<a href="#">EUR</a>
Pacific	<a href="#">PAC</a>
South America	<a href="#">SAM</a>
North America	<a href="#">NAM</a>
Asia	<a href="#">ASI</a>

Our Operations Room has live Airspace, Fuel, and Navigation information updates.  
[www.worldairops.com/opsroom.html](http://www.worldairops.com/opsroom.html)

We provide:

- Route planning and analysis
- Computerised Flight Planning for Business Aviation, Airlines, Charter, Cargo and Military.
- Co-ordination of 3rd party Airport handling, Ground Support, Contract Fuel, Customs Delivery, Ferry, and Positioning Flights
- Charter Flights, Overflight permits, 'First Visit' kits and aerodrome reviews.
- Oceanic Flights, Organised Track Systems, International Procedures.

Visit our website for more: [www.worldairops.com](http://www.worldairops.com)

Or email us your question - we're here to help : [air.support@worldairops.com](mailto:air.support@worldairops.com)  
**15 minute response time.**

