

(3) All ETOPS Alternate Airports within the authorized ETOPS maximum diversion time are reviewed for any changes in conditions that have occurred since dispatch.

(b) In the event that an operator cannot comply with paragraph G135.2.5(a)(1) of this appendix for a specific airport, another ETOPS Alternate Airport must be substituted within the maximum ETOPS diversion time that could be authorized for that flight with weather conditions at or above operating minima.

(c) Pilots must plan and conduct ETOPS under instrument flight rules.

(d) *Time-Limited Systems.* (1) Except as provided in paragraph G135.2.5(d)(3) of this appendix, the time required to fly the distance to each ETOPS Alternate Airport (at the all-engines-operating cruise speed, corrected for wind and temperature) may not exceed the time specified in the Airplane Flight Manual for the airplane's most limiting fire suppression system time required by regulation for any cargo or baggage compartments (if installed), minus 15 minutes.

(2) Except as provided in G135.2.5(d)(3) of this appendix, the time required to fly the distance to each ETOPS Alternate Airport (at the approved one-engine-inoperative cruise speed, corrected for wind and temperature) may not exceed the time specified in the Airplane Flight Manual for the airplane's most time limited system time (other than the airplane's most limiting fire suppression system time required by regulation for any cargo or baggage compartments), minus 15 minutes.

(3) A certificate holder operating an airplane without the Airplane Flight Manual information needed to comply with paragraphs G135.2.5(d)(1) and (d)(2) of this appendix, may continue ETOPS with that airplane until February 17, 2015.

G135.2.6 Communications Requirements.

(a) No person may conduct an ETOPS flight unless the following communications equipment, appropriate to the route to be flown, is installed and operational:

(1) Two independent communication transmitters, at least one of which allows voice communication.

(2) Two independent communication receivers, at least one of which allows voice communication.

(3) Two headsets, or one headset and one speaker.

(b) In areas where voice communication facilities are not available, or are of such poor quality that voice communication is not possible, communication using an alternative system must be substituted.

G135.2.7 *Fuel Requirements.* No person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has the fuel otherwise required by this part and enough

fuel to satisfy each of the following requirements:

(a) *Fuel to fly to an ETOPS Alternate Airport.*

(1) Fuel to account for rapid decompression and engine failure. The airplane must carry the greater of the following amounts of fuel:

(i) Fuel sufficient to fly to an ETOPS Alternate Airport assuming a rapid decompression at the most critical point followed by descent to a safe altitude in compliance with the oxygen supply requirements of §135.157;

(ii) Fuel sufficient to fly to an ETOPS Alternate Airport (at the one-engine-inoperative cruise speed under standard conditions in still air) assuming a rapid decompression and a simultaneous engine failure at the most critical point followed by descent to a safe altitude in compliance with the oxygen requirements of §135.157; or

(iii) Fuel sufficient to fly to an ETOPS Alternate Airport (at the one-engine-inoperative cruise speed under standard conditions in still air) assuming an engine failure at the most critical point followed by descent to the one engine inoperative cruise altitude.

(2) Fuel to account for errors in wind forecasting. In calculating the amount of fuel required by paragraph G135.2.7(a)(1) of this appendix, the certificate holder must increase the actual forecast wind speed by 5% (resulting in an increase in headwind or a decrease in tailwind) to account for any potential errors in wind forecasting. If a certificate holder is not using the actual forecast wind based on a wind model accepted by the FAA, the airplane must carry additional fuel equal to 5% of the fuel required by paragraph G135.2.7(a) of this appendix, as reserve fuel to allow for errors in wind data.

(3) Fuel to account for icing. In calculating the amount of fuel required by paragraph G135.2.7(a)(1) of this appendix, (after completing the wind calculation in G135.2.7(a)(2) of this appendix), the certificate holder must ensure that the airplane carries the greater of the following amounts of fuel in anticipation of possible icing during the diversion:

(i) Fuel that would be burned as a result of airframe icing during 10 percent of the time icing is forecast (including the fuel used by engine and wing anti-ice during this period).

(ii) Fuel that would be used for engine anti-ice, and if appropriate wing anti-ice, for the entire time during which icing is forecast.

(4) Fuel to account for engine deterioration. In calculating the amount of fuel required by paragraph G135.2.7(a)(1) of this appendix (after completing the wind calculation in paragraph G135.2.7(a)(2) of this appendix), the certificate holder must ensure the airplane also carries fuel equal to 5% of the fuel specified above, to account for deterioration in cruise fuel burn performance unless the certificate holder has a program to monitor airplane in-service deterioration to cruise fuel burn performance.