Safety Attribute Inspection (SAI) Data Collection Tool
5.1.8 Extended Operations (ETOPS) (OP)

ELEMENT SUMMARY INFORMATION

Purpose of this Element (certificate holder's responsibility):

- To ensure that the certificate holder provides safe and reliable operations in accordance with their approved ETOPS authorization.

Objective (FAA oversight):

- To determine if the certificate holder's Extended Operations (ETOPS) process meets all applicable requirements of Title 14 of the Code of the Federal Regulations (14 CFR) and FAA policies.

- To determine if the certificate holder's Extended Operations (ETOPS) process incorporates the safety attributes.

- To identify any shortfalls in the certificate holder's Extended Operations (ETOPS) process.

Specific Instructions:

- Intentionally left blank

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirements (SRRs):

- SRRs:
  119.33(a)(1)
  119.33(a)(2)
  119.33(a)(3)
  119.43(b)
  119.43(b)(1)
  119.43(b)(2)
  119.43(c)
  119.49
  119.49(a)
  119.49(b)
  119.5(f)(1)
  119.5(f)(2)
  121.106(a)
  121.106(a)(1)
  121.106(a)(2)
  121.106(b)
  121.122(a)
  121.122(b)
  121.122(c)
  121.135(a)(1)
  121.135(b)
  121.135(b)(1)
  121.135(b)(10)
  121.135(b)(19)

- SRRs:

  121.135(b)(2)
  121.135(b)(21)
  121.135(b)(24)(i)
  121.135(b)(24)(ii)
  121.135(b)(3)
  121.135(b)(5)
  121.135(b)(6)
  121.135(b)(7)
  121.161(a)
  121.161(a)(1)
  121.161(a)(2)
  121.161(a)(3)
  121.161(d)
  121.383(a)(1)
  121.383(a)(2)
  121.383(a)(3)
  121.415(a)
  121.415(a)(4)
  121.565(a)
  121.565(b)(2)
  121.565(c)
  121.624(a)
  121.624(b)
  121.624(b)(1)
  121.624(b)(2)
  121.624(c)
  121.624(d)
  121.631(c)
  121.631(c)(1)
  121.631(c)(2)
  121.631(d)
  121.631(e)
  121.631(f)
  121.633(a)
  121.633(b)
  121.633(b)(1)
  121.633(b)(2)
  121.646(a)
  121.646(a)(1)
  121.646(a)(2)
  121.646(a)(3)
  121.646(b)
  121.646(b)(1)(i)
  121.646(b)(1)(i)(A)
  121.646(b)(1)(i)(B)
  121.646(b)(1)(i)(C)
  121.646(b)(1)(ii)
  121.646(b)(1)(iii)
  121.646(b)(1)(iii)(A)
  121.646(b)(1)(iii)(B)
  121.646(b)(1)(iv)
  121.646(b)(2)
  121.646(b)(3)
  121.687(a)
  121.687(a)(6)
  121.689(a)
  121.689(a)(8)

- SRRs:

  121.97(b)(1)(ii)
  121.99(c)
  121.99(d)
  121.99(e)
  121 App.P
  B.042
  B.055
  C.055
  D.086

Related CFRs & FAA Policy/Guidance:

- Related CFRs:

  Intentionally left blank

- FAA Policy/Guidance:

  FAA Order 8900.1, Volume 3, Chapter 18, Section 4
  FAA Order 8900.1, Volume 4, Chapter 6, Section 3
  AC 120-42A

SAI Section 1 - Procedures Attribute

Objective: Procedures, instructions, and information are

documented methods for accomplishing a process. The certificate holder's policies should establish their compliance posture. Policies may be stand-alone statements, or they may be imbedded within procedures, instructions, or information regarding a particular regulatory requirement. The questions in this section of the data collection tool (DCT) are designed to assist the inspector in determining if the certificate holder has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated questions regarding who, what, when, where, and how. This section contains policy questions, procedural

questions, and instructional or informational questions pertaining to various types of certificate holder

requirements such as actions, prohibitions, or resources (i.e., personnel, facilities, equipment, technical data, etc.).

Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the information listed in the Supplemental Information section of this DCT.
2.	Review the certificate holder's Extended Operations (ETOPS) process to ensure it contains the policies, procedures, instructions and information necessary for personnel to perform their duties and responsibilities with a high degree of safety.
3.	Review the certificate holder's manual to ensure that it contains policies, procedures, instructions, and information necessary for the ETOPS process.

Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's Extended Operations (ETOPS) process meet the specific regulatory and FAA policy requirements:	
1.1.	Does the certificate holder's Extended Operations (ETOPS) process ensure that each certificate holder conducting domestic or flag operations shows that it has an approved system for obtaining, maintaining, and distributing to appropriate personnel current aeronautical data for each airport it uses to ensure a safe operation at that airport which must include, after February 15, 2008 for ETOPS beyond 180 minutes or operations in the North Polar area and South Polar area, facilities at each airport or in the immediate area sufficient to protect the passengers from the elements and to see to their welfare? SRRs: 121.97(b)(1)(ii)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.2.	For certificate holders conducting flag operations, does their Extended Operations (ETOPS) process ensure that voice communications are provided for ETOPS where voice communication facilities are available which consider potential routes and altitudes needed for diversion to ETOPS Alternate Airports except where facilities are not available or are of such poor quality that voice communication is not possible, in which case another communication system is substituted? SRRs: 121.99(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.3.	Except as provided in 14 CFR 121.99(e), for certificate holders conducting flag operations, does the certificate holder's Extended Operations (ETOPS) process ensure that, for ETOPS beyond 180 minutes, they have a second communication system in addition to that required by paragraph (c) of this section which:	

	SRRs: 121.99(d)	
1.3.1.	Is able to provide immediate satellite-based voice communications of landline-telephone fidelity except where immediate, satellite-based voice communications are not available, or are of such poor quality that voice communication is not possible, in which case another communication system is substituted? SRRs: 121.99(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.3.2.	Is able to communicate between the flight crew and air traffic services? SRRs: 121.99(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.3.3.	Is able to communicate between the flight crew and the certificate holder? SRRs: 121.99(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.3.4.	In determining whether such communications are available, considers potential routes and altitudes needed for diversion to ETOPS Alternate Airports? SRRs: 121.99(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.3.5.	Substitutes another communication system for situations where immediate, satellite-based voice communications are not available, or are of such poor quality that voice communication is not possible? SRRs: 121.99(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.4.	For operators of two-engine turbine-powered airplanes with 207 minute ETOPS approval in the North Pacific Area of Operation, does the certificate holder's Extended Operations (ETOPS) process ensure compliance with the requirements of 14 CFR 121.99(d)? SRRs: 121.99(e)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.5.	Except as provided in 14 CFR 121.106(b), does the certificate holder's Extended Operations (ETOPS) process ensure that the following rescue and fire fighting service (RFFS) must be available at each airport listed as an ETOPS Alternate Airport in a dispatch or flight release: SRRs: 121.106(a)	
1.5.1.	For ETOPS up to 180 minutes, each designated ETOPS Alternate Airport must have RFFS equivalent to that specified by ICAO as Category 4, or higher? SRRs: 121.106(a)(1)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.5.2.	For ETOPS beyond 180 minutes, each designated ETOPS Alternate Airport must have RFFS equivalent to that specified by ICAO Category 4, or higher and the aircraft must remain within the ETOPS authorized diversion time from an Adequate Airport that has RFFS equivalent to that specified by ICAO Category 7, or higher? SRRs: 121.106(a)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.6.	If the equipment and personnel required in 14 CFR 121.106(a) are not immediately available at an airport, does the certificate holder's Extended Operations (ETOPS) process indicate that they may still list the airport on the dispatch or flight release if the airport's RFFS can be augmented to meet 14 CFR 121.106(a) by local fire fighting assets that have a 30-minute response time from the time that the local assets are notified while the diverting airplane is en route and are available on arrival of the diverting airplane and must remain as long as the diverting airplane needs RFFS? SRRs: 121.106(b)	☐ Yes ☐ No, Explain ☐ Not Applicable

1.7.	For a certificate holder conducting supplemental operations other than all-cargo operations in an airplane with more than two engines, does their Extended Operations (ETOPS) process show that:	
1.7.1.	A two-way radio communication system or other means of communication approved by the FAA is available and that it ensures reliable and rapid communications under normal operating conditions over the entire route (either direct or via approved point-to-point circuits) between each airplane and the certificate holder, and between each airplane and the appropriate air traffic services, except as specified in 121.351(c)? SRRs: 121.122(a)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.7.2.	Provide voice communications for ETOPS where voice communication facilities are available while considering potential routes and altitudes needed for diversion to ETOPS Alternate Airports except where facilities are not available or are of such poor quality that voice communication is not possible, another communication system must be substituted? SRRs: 121.122(b)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.8.	For a certificate holder conducting ETOPS beyond 180 minutes in supplemental operations other than all-cargo operations in an airplane with more than two engines, does their Extended Operations (ETOPS) process:	
1.8.1.	Require a second communication system in addition to that required by 14 CFR 121.122(b)? SRRs: 121.122(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.9.	For a certificate holder conducting ETOPS beyond 180 minutes in supplemental operations other than all-cargo operations in an airplane with more than two engines, does their Extended Operations (ETOPS) process require a second communication system in addition to that required by 14 CFR 121.122(b) that: SRRs: 121.122(c)	
1.9.1.	Is able to provide immediate satellite-based voice communications of landline telephone-fidelity? SRRs: 121.122(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.9.2.	Provide communication capabilities between the flight crew and air traffic services and the flight crew and the certificate holder? SRRs: 121.122(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.9.3.	When, in determining whether such communications are available, the certificate holder considered potential routes and altitudes needed for diversion to ETOPS Alternate Airports? SRRs: 121.122(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.9.4.	Where immediate, satellite-based voice communications are not available, or are of such poor quality that voice communication is not possible, another communication system is substituted? SRRs: 121.122(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.10.	Does the certificate holder's manual contain airplane performance data to support all phases of Extended Operations (ETOPS)? SRRs: 121.135(b)(10)	☐ Yes ☐ No, Explain
1.11.	Does the certificate holder's manual contain: SRRs: 121.135(b)	
1.11.1.	A specific passenger recovery plan for each ETOPS Alternate Airport used in ETOPS operations greater than 180 minutes for passenger flag operations?	☐ Yes

	SRRs: 121.135(b)(24)(i)	☐ No, Explain ☐ Not Applicable
1.11.2.	A specific passenger recovery plan for each ETOPS Alternate Airport used in ETOPS operations greater than 180 minutes for those supplemental operations that are not all-cargo operations outside the 48 contiguous States and Alaska? SRRs: 121.135(b)(24)(i)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.11.3.	A specific passenger recovery plan for each diversion airport used in ETOPS operations greater than 180 minutes for passenger flag operations in the North Polar Area and the South Polar Area? SRRs: 121.135(b)(24)(ii)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.11.4.	A specific passenger recovery plan for each diversion airport used in ETOPS operations greater than 180 minutes for those supplemental operations that are not all-cargo operations outside the 48 contiguous States and Alaska in the North Polar Area and the South Polar Area? SRRs: 121.135(b)(24)(ii)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.12.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, except as provided in 14 CFR 121.161(e) of this section, unless approved by the Administrator in accordance with Appendix P of this part and authorized in the certificate holder's operations specifications, no certificate holder may operate a turbine-engine-powered airplane over a route that contains a point: SRRs: 121.161(a)	
1.12.1.	Farther than a flying time from an Adequate Airport (at a one-engine-inoperative cruise speed under standard conditions in still air) of 60 minutes for a two-engine airplane or 180 minutes for a passenger-carrying airplane with more than two engines? SRRs: 121.161(a)(1)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.12.2.	Within the North Polar Area? SRRs: 121.161(a)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.12.3.	Within the South Polar Area? SRRs: 121.161(a)(3)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.13.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, unless authorized by the Administrator, they do not operate reciprocating-engine-powered airplanes over routes that contain any point farther than 60 minutes flying time (at a one-engine-inoperative cruise speed under standard conditions in still air) from an Adequate Airport? SRRs: 121.161(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.14.	Does the certificate holder's Extended Operations (ETOPS) process ensure that each training program provides the following ground training as appropriate to the particular assignment of the crewmember or dispatcher: SRRs: 121.415(a)	
1.14.1.	After February 15, 2008, training for crewmembers and dispatchers in their roles and responsibilities in the certificate holder's passenger recovery plan, if applicable? SRRs: 121.415(a)(4)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.15.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, except as provided in 14 CFR 121.565(b), whenever an airplane engine	☐ Yes ☐ No, Explain

	fails or whenever an engine is shutdown to prevent possible damage, the pilot in command must land the airplane at the nearest suitable airport, in point of time, at which a safe landing can be made? SRRs: 121.565(a)	☐ Not Applicable
1.16.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, if not more than one engine of an airplane that has three or more engines fails or is shut down to prevent possible damage, the pilot-in-command may proceed to an airport that the pilot selects if, after considering the altitude, weight, and useable fuel at the time that the engine is shutdown, the pilot makes a reasonable decision that proceeding to that airport is as safe as landing at the nearest suitable airport? SRRs: 121.565(b)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.17.	Does the certificate holder's Extended Operations (ETOPS) process ensure that the pilot-in-command reports each engine shutdown in flight to the appropriate communication facility as soon as practicable and keeps that facility fully informed of the progress of the flight? SRRs: 121.565(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.18.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person dispatches or releases an airplane for an ETOPS flight unless enough ETOPS Alternate Airports are listed in the dispatch or flight release such that the airplane remains within the authorized ETOPS maximum diversion time and in selecting these ETOPS Alternate Airports, the certificate holder considers all adequate airports within the authorized ETOPS diversion time for the flight that meet the standards of this part? SRRs: 121.624(a)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.19.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person lists an airport as an ETOPS Alternate Airport in a dispatch or flight release unless, when it might be used (from the earliest to the latest possible landing time): SRRs: 121.624(b)	
1.19.1.	The appropriate weather reports or forecasts, or any combination thereof, indicate that the weather conditions will be at or above the ETOPS Alternate Airport minima specified in the certificate holder's operations specifications? SRRs: 121.624(b)(1)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.19.2.	The field condition reports indicate that a safe landing can be made? SRRs: 121.624(b)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.20.	Does the certificate holder's Extended Operations (ETOPS) process ensure that once a flight is en route, the weather conditions at each ETOPS Alternate Airport must meet the requirements of 14 CFR 121.631(c)? SRRs: 121.624(c)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.21.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may list an airport as an ETOPS Alternate Airport in the dispatch or flight release unless that airport meets the public protection requirements of 14 CFR 121.97(b)(1)(ii)? SRRs: 121.624(d)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.22.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may allow a flight to continue beyond the ETOPS Entry Point unless:	

	SRRs: 121.631(c)		
1.22.1.	Except as provided in 14 CFR 121.631(d), the weather conditions at each ETOPS Alternate Airport required by 14 CFR 121.624 are forecast to be at or above the operating minima for that airport in the certificate holder's operations specifications when it might be used (from the earliest to the latest possible landing time)? SRRs: 121.631(c)(1)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.22.2.	All ETOPS Alternate Airports within the authorized ETOPS maximum diversion time are reviewed and the flight crew advised of any changes in conditions that have occurred since dispatch? SRRs: 121.631(c)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.23.	Does the certificate holder's Extended Operations (ETOPS) process ensure that if 14 CFR 121.631(c)(1) cannot be met for a specific airport, the dispatch or flight release may be amended to add an ETOPS Alternate Airport within the maximum ETOPS diversion time that could be authorized for that flight with weather conditions at or above operating minima? SRRs: 121.631(d)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.24.	Does the certificate holder's Extended Operations (ETOPS) process ensure that before the ETOPS Entry Point, the pilot in command for a supplemental operator or a dispatcher for a flag operator must use company communications to update the flight plan if needed because of a re-evaluation of aircraft system capabilities? SRRs: 121.631(e)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.25.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may change an original destination or alternate airport that is specified in the original dispatch or flight release to another airport while the aircraft is en route unless the other airport is authorized for that type of aircraft and the appropriate requirements of 14 CFR 121.593 through 121.661 and 121.173 are met at the time of redispatch or amendment of the flight release? SRRs: 121.631(f)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.26.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, for ETOPS up to and including 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch release if the time needed to fly to that airport (at the approved one-engine inoperative cruise speed under standard conditions in still air) would exceed the approved time for the airplane's most limiting ETOPS Significant System (including the airplane's most limiting fire suppression system time for those cargo and baggage compartments required by regulation to have fire-suppression systems) minus 15 minutes? SRRs: 121.633(a)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.27.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, for ETOPS up to and including 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a flight release if the time needed to fly to that airport (at the approved one-engine inoperative cruise speed under standard conditions in still air) would exceed the approved time for the airplane's most limiting ETOPS Significant System (including the airplane's most limiting fire suppression system time for those cargo and baggage compartments required by regulation to have fire-suppression systems) minus 15 minutes? SRRs: 121.633(a)	☐ Yes ☐ No, Explain ☐ Not Applicable	
1.28.	Does the certificate holder's Extended Operations (ETOPS) process ensure		

	that, for ETOPS beyond 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch or flight release if the time needed to fly to that airport: SRRs: 121.633(b)	
1.28.1.	At the all engine operating cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire suppression systems (except as provided in 14 CFR Part 121.633(c))? SRRs: 121.633(b)(1)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.28.2.	At the one-engine-inoperative cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting ETOPS Significant System time (other than the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire-suppression systems)? SRRs: 121.633(b)(2)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.29.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight a turbine-engine powered airplane with more than two engines for a flight more than 90 minutes (with all engines operating at cruise power) from an Adequate Airport unless: SRRs: 121.646(a)	
1.29.1.	The airplane has enough fuel to meet the requirements of 121.645(b)? SRRs: 121.646(a)(1)	☐ Yes ☐ No, Explain
1.29.2.	The airplane has enough fuel to fly to the Adequate Airport (Assume a rapid decompression at the most critical point and assume a descent to a safe altitude in compliance with the oxygen supply requirements of 121.333 and consider the expected wind and other weather conditions? SRRs: 121.646(a)(2)	☐ Yes ☐ No, Explain
1.29.3.	The airplane has enough fuel to hold for 15 minutes at 1500 feet above field elevation and conduct a normal approach and landing? SRRs: 121.646(a)(3)	☐ Yes ☐ No, Explain
1.30.	Does the certificate holder's Extended Operations (ETOPS) process ensure that 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? SRRs: 121.646(b)	☐ Yes ☐ No, Explain
1.31.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to fly to an ETOPS Alternate Airport while accounting for rapid decompressions and engine failures, all the while considering that the airplane must carry the greater of the following: SRRs: 121.646(b)(1)(i)	
1.31.1.	Sufficient fuel 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 121.333 of this chapter? SRRs: 121.646(b)(1)(i)(A)	☐ Yes ☐ No, Explain
1.31.2.	Sufficient fuel to fly to an ETOPS Alternate Airport (at the one-engine-inoperative cruise speed) assuming a rapid decompression and a	☐ Yes ☐ No, Explain

	simultaneous engine failure at the most critical point followed by descent to a safe altitude in compliance with the oxygen requirements of 121.133 of this chapter? SRRs: 121.646(b)(1)(i)(B)	
1.31.3.	Sufficient fuel to fly to an ETOPS Alternate Airport (at the one engine inoperative cruise speed) assuming an engine failure at the most critical point followed by descent to the one engine inoperative cruise altitude? SRRs: 121.646(b)(1)(i)(C)	☐ Yes ☐ No, Explain
1.32.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to fly to an ETOPS Alternate Airport while accounting for errors in wind forecasting and: SRRs: 121.646(b)(1)(ii)	
1.32.1.	In calculating the amount of fuel required by paragraph (b)(1)(i) of this section, 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? SRRs: 121.646(b)(1)(ii)	☐ Yes ☐ No, Explain
1.32.2.	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 for paragraph (b)(1)(i) of this section, as reserve fuel to allow for errors in wind data? SRRs: 121.646(b)(1)(ii)	☐ Yes ☐ No, Explain
1.33.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to fly to an ETOPS Alternate Airport while accounting for icing and in calculating the amount of fuel required by paragraph (b)(1)(i) of this section (after completing the wind calculation in paragraph (b)(1)(ii) of this section), the certificate holder must ensure that, in anticipation of possible icing during the diversion, the airplane carries the greater of: SRRs: 121.646(b)(1)(iii)	
1.33.1.	The 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)? SRRs: 121.646(b)(1)(iii)(A)	☐ Yes ☐ No, Explain
1.33.2.	The fuel that would be used for engine anti-ice, and if appropriate wing anti-ice, for the entire time during which icing is forecast? SRRs: 121.646(b)(1)(iii)(B)	☐ Yes ☐ No, Explain
1.34.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to fly to an ETOPS Alternate Airport while accounting for engine deterioration and: SRRs: 121.646(b)(1)(iv)	
1.34.1.	In calculating the amount of fuel required by paragraph (b)(1)(i) of this section (after completing the wind calculation in paragraph (b)(1)(ii) of this section), 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	☐ Yes ☐ No, Explain

	performance? SRRs: 121.646(b)(1)(iv)	
1.35.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to account for holding, approach, and landing and: SRRs: 121.646(b)(2)	
1.35.1.	In addition to the fuel required by paragraph (b)(1) of this section, the airplane must carry fuel sufficient to hold at 1500 feet above field elevation for 15 minutes upon reaching an ETOPS Alternate Airport and then conduct an instrument approach and land? SRRs: 121.646(b)(2)	☐ Yes ☐ No, Explain
1.36.	Does the certificate holder's Extended Operations (ETOPS) process ensure that no person may dispatch or release for flight an ETOPS flight unless, considering wind and other weather conditions expected, it has enough fuel to account for APU use and: SRRs: 121.646(b)(3)	
1.36.1.	If an APU is a required power source, the certificate holder must account for its fuel consumption during the appropriate phases of flight? SRRs: 121.646(b)(3)	☐ Yes ☐ No, Explain
1.37.	Does the certificate holder's Extended Operations (ETOPS) process ensure that the dispatch release contains at least the following information concerning each flight: SRRs: 121.687(a)	
1.37.1.	For each flight dispatched as an ETOPS flight, the ETOPS diversion time for which the flight is dispatched? SRRs: 121.687(a)(6)	☐ Yes ☐ No, Explain ☐ Not Applicable
1.38.	Does the certificate holder's Extended Operations (ETOPS) process ensure that, except as provided in paragraph 14 CFR Part 121.689(c), the flight release contain at least the following information concerning each flight: SRRs: 121.689(a)	
1.38.1.	For each flight released as an ETOPS flight, the ETOPS diversion time for which the flight is released? SRRs: 121.689(a)(8)	☐ Yes ☐ No, Explain ☐ Not Applicable

1.39.	Does the certificate holder s manual contain the required references to, or excerpts from, the operations specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)?
	SRRs: 119.43(b); C.055; B.042; D.086; 119.49; B.055
	Related Design JTIs:
	1. Check that the Certificate Holder has operations specifications for conducting flag ETOPS.
	    Sources: 119.49(a)
	    Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)
	2. Check that the Certificate Holder has operations specifications for conducting flag operations for each kind of ETOPS authorized.
	    Sources: 119.49(a)(5)
	    Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP);
		☐ Yes
		☐ No, Explain

	3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	3. Check that the Certificate Holder has operations specifications for conducting flag operations containing authorization for ETOPS routes. *Sources:* 119.49(a)(6) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 4. Check that the Certificate Holder has operations specifications for conducting flag operations that specify limitations for ETOPS areas. *Sources:* 119.49(a)(6) 5. Check that the Certificate Holder has operations specifications for conducting flag operations specifying limitations for ETOPS routes. *Sources:* 119.49(a)(6) 6. Check that the Certificate Holder has operations specifications for conducting flag operations specifying limitations for ETOPS areas. *Sources:* 119.49(a)(6) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 7. Check that the Certificate Holder has operations specifications for conducting supplemental ETOPS. *Sources:* 119.49(b)(1) 8. Check that the Certificate Holder has operations specifications for conducting supplemental operations for each kind of ETOPS authorized. *Sources:* 119.49(b)(5) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 9. Check that the Certificate Holder has operations specifications for conducting supplemental operations that grants authorization for ETOPS routes. *Sources:* 119.49(b)(6) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 10. Check that the Certificate Holder has operations specifications for conducting supplemental operations that grants authorization for ETOPS areas. *Sources:* 119.49(b)(6) 11. Check that the Certificate Holder has operations specifications for conducting supplemental operations that specify limitations for ETOPS routes. *Sources:* 119.49(b)(6) 12. Check that the Certificate Holder has operations specifications for conducting supplemental operations specifying limitations for ETOPS areas. *Sources:* 119.49(b)(6)	
1.40.	If the certificate holder's manual includes excerpts from its operations specifications, are the excerpts clearly identified as part of the operations specifications? SRRs: 119.43(b)(1); C.055; B.042; D.086; B.055	☐ Yes ☐ No, Explain ☐ Not Applicable
1.41.	Does the certificate holder s manual require compliance with operations	☐ Yes

	specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 119.43(b)(2); C.055; B.042; D.086; B.055	☐ No, Explain
1.42.	Does the certificate holder s Extended Operations (ETOPS) process contain a method for keeping all persons engaged in its operations informed of the provisions of the operations specifications listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 119.43(c); C.055; B.042; D.086; B.055	☐ Yes ☐ No, Explain
1.43.	Does the certificate holder's Extended Operations (ETOPS) process comply with the guidance contained in FAA Order 8900.1, Volume 3, Chapter 18, Section 4? *Related Design JTIs:* 1. Check that the Part 121 Certificate Holder has an evaluation for Extended Range Operations with Two-Engine Airplanes (ETOPS), with maximum diversion times in excess of 75 minutes. *Sources:* B.042a; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.9(OP) 2. Check that the Part 121 Certificate Holder has approval for Extended Range Operations with Two-Engine Airplanes (ETOPS), with maximum diversion times in excess of 75 minutes. *Sources:* B.042a; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B 3. Check that the Part 121 Certificate Holder has approval for all ER-OPS with maximum diversion times in excess of 75 minutes, when the airplane/engine combination to be used is type design approved for the extended range operation proposed. *Sources:* B.042a(1); FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.9(OP) 4. Check that the Part 121 Certificate Holder has approval for all ER-OPS with maximum diversion times in excess of 75 minutes, when the ER-OPS flight operation programs meets or exceeds AC 120-42 criteria. *Sources:* B.042a(2); FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 5. Check that the Part 121 Certificate Holder has approval and Regional concurrence, for all ER-OPS with maximum diversion times in excess of 75 minutes. *Sources:* B.042a(3); FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B 6. Check that the Part 121 Certificate Holder has an evaluation for extended range operations with maximum diversion times of 75 minutes or less. *Sources:* b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 7. Check that the Part 121 Certificate Holder has approval for extended range operations with maximum diversion times of 75 minutes or less. *Sources:* b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP) 8. Check that the Part 121 Certificate Holder has airplanes whose design must be reviewed to identify any special equipment necessary to safely conduct ER-OPS of 75 minutes or less.	☐ Yes ☐ No, Explain

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP)

9. Check that the Part 121 Certificate Holder has airplanes whose design must be reviewed to identify any special requirements necessary to safely conduct ER-OPS of 75 minutes or less.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.9(OP)

10. Check that the Part 121 Certificate Holder has approval, in accordance with AC 120-42, ETOPS for ER-OPS of 75 minutes or less.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)

11. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)

12. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific considering the performance of the airplane to be used.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)

13. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific considering the character of the terrain.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)

14. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific considering the performance of the airplane to be used.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 3.1.9(OP)

15. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific considering the capabilities of the alternate airports being used.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 5.1.6(OP)

16. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Western Pacific considering the special provision for this area in the operations specifications.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 5.1.6(OP)

17. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea.

Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B

Interfaces: 5.1.6(OP)

18. Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea considering the

		reliability of the propulsion system.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 1.1.2(AW); 1.1.2(OP)	
	19.	Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea considering the character of the terrain.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 3.2.1(OP); 5.1.6(OP); 5.1.7(OP)	
	20.	Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea considering the performance of the airplane to be used.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 3.1.9(OP)	
	21.	Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea considering the capabilities of the alternate airports being used.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 5.1.6(OP)	
	22.	Check that the Part 121 Certificate Holder has approval on a case-by-case basis for operations in the Caribbean Sea considering the special provision for this area in the operations specifications.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	23.	Check that the Part 121 Certificate Holder has operations specifications approval for ER-OPS with a diversion time of 75 minutes or less.	
		Sources: b.042b; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	24.	Check that the Part 121 Certificate Holder has a general ER-OPS authorization in the operations specifications for operations in the Western Atlantic.	
		Sources: B.042c; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 5.1.6(OP); 5.1.7(OP)	
	25.	Check that the Part 121 Certificate Holder has a general ER-OPS authorization in the operations specifications for operations in the Caribbean Sea.	
		Sources: B.042c; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 5.1.6(OP); 5.1.7(OP)	
	26.	Check that the Part 121 Certificate Holder has a general ER-OPS authorization in the operations specifications.	
		Sources: B.042d; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 5.1.6(OP); 5.1.7(OP)	
	27.	Check that the Part 121 Certificate Holder has enroute alternate airports that have been specified in the operations specifications.	
		Sources: B.042e; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
		Interfaces: 3.2.1(OP); 5.1.2(AW); 5.1.6(OP)	
	28.	Check that the Part 121 Certificate Holder has enroute alternate airports that meet the enroute alternate criteria in AC-120-42 for use in	

	ER-OPS operations.	
	Sources: B.042e; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
	Interfaces: 3.2.1(OP); 5.1.2(AW); 5.1.6(OP)	
29.	Check that the Part 121 Certificate Holder has authorization to conduct special ER-OPS in the Western Atlantic using a maximum diversion time of 75 minutes or less. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
30.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Western Pacific and are listed in the operations specifications by make and any special equipment. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP)	
31.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Western Pacific and are listed in the operations specifications by model and any special equipment. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP)	
32.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Western Pacific and are listed in the operations specifications by make and any special limitations. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP)	
33.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Western Pacific and are listed in the operations specifications by model and any special limitations. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP)	
34.	Check that the Part 121 Certificate Holder has authorization to conduct special ER-OPS in the Caribbean Sea using a maximum diversion time of 75 minutes or less. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
35.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by make and any special equipment. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
36.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by model and any special equipment. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
37.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by make and any special limitations. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	

	38.	Check that the Part 121 Certificate Holder has ER-OPS operations that are approved for the Caribbean Sea and are listed in the operations specifications by model and any special limitations. *Sources:* B.042f; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
	39.	Check that the Part 121 Certificate Holder has been issued operations specifications that involve operations in the Central East Pacific (CEP) airspace. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
	40.	Check that the Part 121 Certificate Holder has been issued operations specifications that involve operations in the North Pacific (NOPAC) airspace. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B	
	41.	Check that the Part 121 Certificate Holder has operations specifications that involves operations in the North Atlantic Minimum Navigation Performance Specifications (NAT/MNPS) airspace. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
	42.	Check that the Part 121 Certificate Holder has operations specifications that involve operations in the areas of magnetic unreliability. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
	43.	Check that the Part 121 Certificate Holder has operations specifications if the operator is authorized to use fuel reserves in ER-OPS. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 3.2.2(OP)	
	44.	Check that the Part 121 Certificate Holder has operations specifications if the operation involves transatlantic flight in the North Atlantic. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
	45.	Check that the Part 121 Certificate Holder has been issued operations specifications B041 if the operation involves transatlantic flight in the North Atlantic. *Sources:* B.042g; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 5.1.6(OP); 5.1.7(OP)	
	46.	Check that the Part 121 Certificate Holder has been issued operations specifications C055 that includes Extended Range Operations (ER-OPS). *Sources:* C.055; FAA Order 8900.1. Vol 3, Ch 18, Sec 4, Part B *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
1.44.	Does the certificate holder's Extended Operations (ETOPS) process comply with the guidance contained in FAA Order 8900.1, Volume 4, Chapter 6, Section 3?		☐ Yes ☐ No, Explain
1.45.	Does the certificate holder's Extended Operations (ETOPS) process comply with the guidance contained in Advisory Circular 120-42A?		☐ Yes ☐ No, Explain

Related Design JTIs:

1. Check that the Part 121 Certificate Holder has extended range operations that contain a point further than one hour flying time at the approved one-engine inoperative cruise speed (under standard conditions in still air) from an adequate airport.

   Sources: AC-120-42a, 4(e)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

2. Check that the Part 121 Certificate Holder has extended range operations that has an outbound entry point which is one hour flying time at the approved one-engine inoperative cruise speed (under standard conditions in still air) from an adequate airport.

   Sources: AC-120-42a, 4(f)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

3. Check that the Part 121 Certificate Holder has an evaluation considering the continuing operational concepts outlined in paragraph 10 of AC-120-42a

   Sources: AC-120-42a, 5

4. Check that the Part 121 Certificate Holder has ETOPS operations that are not limited to over water operations.

   Sources: AC-120-42a, 5c(1)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

5. Check that the Part 121 Certificate Holder has additional restrictions imposed on their ETOPS operations.

   Sources: AC-120-42a, 5c(2)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

6. Check that the Part 121 Certificate Holder has deviations granted to operate their ETOPS operations in excess of the basic requirements.

   Sources: AC-120-42a, 5c(2)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

7. Check that the Part 121 Certificate Holder has airports that are adequate for the airplane used.

   Sources: AC-120-42a, 5c(3)

   Interfaces: 5.1.6(OP)

8. Check that the Part 121 Certificate Holder has a deviation from the required time restriction.

   Sources: AC-120-42a, 5c(4)

   Interfaces: 5.1.6(OP); 5.1.7(OP)

9. Check that the Part 121 Certificate Holder has made an assessment to ensure that exceptional piloting skills are not required during its extended range operations.

   Sources: AC-120-42a, 5e

   Interfaces: 3.1.3(OP); 4.2.3(OP); 4.2.9(OP)

10. Check that the Part 121 Certificate Holder has made an assessment to ensure that exceptional crew coordination are not required during its extended range operations.

    Sources: AC-120-42a, 5e

11. Check that the Part 121 Certificate Holder has trained its personnel to achieve competence in extended range operations.

    Sources: AC-120-42a, f(3)

    Interfaces: 4.2.5(OP); 4.2.7(OP); 4.3.1(OP); 4.3.2(OP)

	12.	Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 75 minutes at the approved one-engine cruise speed (under standard conditions in still air). *Sources:* AC 120-42a, 10 f(1)(i) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	13.	Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 120 minutes at the approved one-engine cruise speed (under standard conditions in still air). *Sources:* AC 120-42a, 10 f(1)(i) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	14.	Check that the Part 121 Certificate Holder has authorization in their operations specifications for extended range operations within an area where the diversion time at any point along the proposed route of flight to an adequate airport is 180 minutes at the approved one-engine cruise speed (under standard conditions in still air). *Sources:* AC 120-42a, 10 f(1)(i) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	15.	Check that the Part 121 Certificate Holder has approval in the operations specifications for the authorized areas used in ETOPS. *Sources:* AC 120-42a, 10 f(1)(ii) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	16.	Check that the Part 121 Certificate Holder does not have a policy that would prejudice the final authority of the pilot in command. *Sources:* AC 120-42a, 10 f(3) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	17.	Check that the Part 121 Certificate Holder does not have a policy that would prejudice the final responsibility of the pilot in command. *Sources:* AC 120-42a, 10 f(3)	
	18.	Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the minimum altitudes to be flown along planned routes. *Sources:* AC 120-42a, 10 g(2)(iii) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	19.	Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the minimum altitudes to be flown along diversionary routes. *Sources:* AC 120-42a, 10 g(2)(iii) *Interfaces:* 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
	20.	Check that the Part 121 Certificate Holder has, in its operations specifications, provisions that preclude operations in excess of the maximum diversion time at any point in route to a suitable airport for	

	landing.	
	Sources: AC 120-42a, 10 g(2)(iv)	
	Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
21.	Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering airports authorized for use, including alternates, and associated instrument approaches and operating minima.	
	Sources: AC 120-42a, 10 g(2)(v)	
	Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
22.	Check that the Part 121 Certificate Holder has, in its operations specifications, provisions covering the identification of those airplanes designated for extended range operation by make and model as well as serial and registration numbers.	
	Sources: AC 120-42a, 10 g(2)(vii)	
	Interfaces: 1.1.2(AW); 1.1.2(OP); 3.1.3(OP); 3.1.4(OP); 3.1.9(OP); 3.2.1(OP); 4.2.9(OP); 4.3.2(OP); 5.1.2(AW); 5.1.6(OP); 5.1.7(OP)	
23.	Check that the Part 121 Certificate Holder has a document showing that a FAA-witnessed validation flight has been accomplished using the specified airframe-engine combination.	
	Sources: AC 120-42a, 10 h	
24.	Check that the Part 121 Certificate Holder utilizes AC 120-42a, Appendix 3 for the definitions dealing with suitable enroute alternate airports.	
	Sources: AC 120-42A Appendix 3	
25.	Check that the Part 121 Certificate Holder utilizes AC 120-42a, Appendix 5 for the definitions dealing with ETOPS operational program criteria.	
	Sources: AC 120-42a Appendix 5	
2.	Does the certificate holder's manual contain general policies for the Extended Operations (ETOPS) process that comply with the SRRs? SRRs: 119.5(f)(1); 119.5(f)(2); 119.33(a)(1); 119.33(a)(2); 119.33(a)(3); 121.135(b)(1); 121.135(b)(5); 121.135(b)(6); 121.135(b)(7); 121.135(b)(19); 121.135(b)(21); 121.383(a)(1); 121.383(a)(2); 121.383(a)(3); 119.49(a); 119.49(b); 121 App.P	☐ Yes ☐ No, Explain
3.	Does the certificate holder's manual reference the appropriate Federal Aviation Regulations listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 121.135(b)(3)	☐ Yes ☐ No, Explain
4.	Does the certificate holder's manual contain the duties and responsibilities for personnel who will accomplish the Extended Operations (ETOPS) process ? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
5.	Does the certificate holder's manual include instructions and information for personnel to meet the requirements of the Extended Operations (ETOPS) process? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain

SAI Section 1 - Procedures Attribute Drop-Down Menu
1.   No procedures, policy, instructions or information specified.
2.   Procedures or instructions and information do not identify (who, what, when, where, how).
3.   Procedures, policy or instructions and information do not comply with CFR.
4.   Procedures, policy or instructions and information do not comply with FAA policy and guidance.
5.   Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
6.   Procedures, policy or instructions and information unclear or incomplete.
7.   Documentation quality (e.g., unreadable or illegible).
8.   Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM - Flight Operations Manual to GMM - General Maintenance Manual, etc.).
9.   Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
10. Resource requirements incomplete (personnel, facilities, equipment, technical data).
11. Other.

SAI Section 2 - Controls Attribute

Objective: Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the DCT are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the system to ensure that the most important policies, procedures, or instructions and information will be followed.

Controls may be in the form of administrative controls, which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to questions regarding who, what, when, where, and how. Controls may also be in the form of engineered controls, such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).

Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the control questions below.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the controls that it has documented.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Are the following controls built into the Extended Operations (ETOPS) process:	
1.1.	Is there a control in place to ensure that the en route alternate criteria are met for ETOPS?	☐ Yes ☐ No, Explain
1.2.	Is there a control in place to ensure that crewmembers are qualified in the certificate holder's ETOPS operations?	☐ Yes ☐ No, Explain
1.3.	Is there a control in place to ensure that all airports used in ETOPS have safe conditions and adequate ground equipment?	☐ Yes ☐ No, Explain
1.4.	Is there a control in place to ensure that only airplanes listed in operations specifications D086 be used in ETOPS operations?	☐ Yes ☐ No, Explain
2.	Does the certificate holder have a documented method for assessing the impact of any changes made to the controls in the ETOPS process?	☐ Yes ☐ No, Explain

	SAI Section 2 - Controls Attribute **Drop-Down Menu**
1.	No controls specified.
2.	Documentation for the controls do not identify (who, what, when, where, how).
3.	Controls incomplete.
4.	Controls could be circumvented.
5.	Controls could be unenforceable.
6.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
7.	Other.

SAI Section 3 - Process Measurement Attribute

Objective: Process measurements are used by the certificate holder to measure and to assess its processes, to identify and to correct problems or potential problems, and to make improvements to the processes. The questions in this section of the DCT are designed to assist the inspector in determining if the certificate holder measures or assesses information to identify, analyze, and document potential problems with the process. Process measurements are a certificate holder's internal evaluation or auditing of the most important policies, procedures, or instructions and information associated with an element.

To prevent the duplication of work, process measurements are most commonly addressed through a combination of auditing features contained in both the certificate holder's safety program/internal evaluation program (for operations and cabin safety related issues) and the auditing function of the Continuous Analysis and Surveillance System (for airworthiness or maintenance/inspection related issues). The director of safety and the quality assurance department often work together to accomplish this function for the certificate holder. This approach requires amendment of the safety program/internal evaluation program audit forms or checklists and the Continuous Analysis and Surveillance System audit forms or checklists to include the specific process measurements for each element.

Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the process measurement questions below.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the process measurements that it has documented.

Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's Extended Operations (ETOPS) process include the following process measurements:	
1.1.	Process measurements that would reveal if en route alternate criteria were not met for ETOPS?	☐ Yes ☐ No, Explain
1.2.	Process measurements that would reveal if personnel were not properly qualified in ETOPS operations?	☐ Yes ☐ No, Explain
1.3.	Process measurements that would reveal if all airports used in ETOPS did not have safe conditions and adequate ground equipment?	☐ Yes ☐ No, Explain
1.4.	Process measurements that would reveal if an airplane not listed in operations specifications D086 was used in ETOPS operations?	☐ Yes ☐ No, Explain
2.	Is there a process measurement or process measurements that would reveal if the certificate holder's policy, procedures, instructions, and information were not followed?	☐ Yes ☐ No, Explain
3.	Does the certificate holder document its process measurement results?	☐ Yes ☐ No, Explain
4.	Does the certificate holder use its process measurement results to improve its	☐ Yes

	programs?	☐ No, Explain
5.	Does the organization that conducts the process measurements have direct access to the person with responsibility for the ETOPS process?	☐ Yes ☐ No, Explain

SAI Section 3 - Process Measurement Attribute Drop-Down Menu
1.   No process measurements specified.
2.   Documentation for the process measurements does not identify (who, what, when, where, how).
3.   Inability to identify negative findings.
4.   No provisions for implementing corrective actions.
5.   Ineffective follow-up to determine effectiveness of corrective actions.
6.   Resources requirements (personnel, facilities, equipment, technical data).
7.   Other.

SAI Section 4 - Interfaces Attribute

Objective: Interfaces are used by the certificate holder to identify and manage the interactions between processes. The questions in this section of the DCT are designed to assist the inspector in determining whether or not interactions between the policies, procedures, or instructions and information associated with other independent processes within the certificate holder's organization are documented. Written policies, procedures, or instructions and information that are interrelated and located in different areas within the certificate holder's system must be consistent and complement each other. For the interfaces to be effectively managed, the certificate holder's system should identify and document the

interfaces.

Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the interfaces associated with the Extended Operations (ETOPS) process that have been identified along with the individual questions in section 1, Procedures, of this DCT.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the interfaces that it has documented.

Questions		
	To meet this objective, the inspector must answer the following questions: Note: The design job task items (JTIs) displayed with the questions in section 1, Procedures, of this DCT identify potential interfaces (by element number) for this element.	
1.	Does the certificate holder's system properly address the interfaces that are identified along with the questions in section 1, Procedures of this DCT?	☐ Yes ☐ No, Explain
2.	Does the certificate holder document a method for assessing the impact of any changes to the associated interfaces within the ETOPS process?	☐ Yes ☐ No, Explain

SAI Section 4 - Interfaces Attribute Drop-Down Menu
1.   No interfaces specified.
2.   The following interfaces not identified within the Certificate Holder's manual system:
3.   Interfaces listed are inaccurate.
4.   Specific location of interfaces not identified within the manual system.
5.   Other

	SAI Section 5 - Management Responsibility & Authority Attributes

Objective: The questions in this section address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a clearly identifiable, qualified, and knowledgeable person who is responsible for the process, is answerable for the quality of the process, and has the authority to establish and modify the process. (The person with the authority may or may not be the person with the responsibility.)

Tasks	
	To meet this objective, the inspector must accomplish the following tasks:
1.	Identify the person who has overall responsibility for the Extended Operations (ETOPS) process.
2.	Identify the person who has overall authority for the Extended Operations (ETOPS) process.
3.	Review the duties and responsibilities of the person(s), documented in the certificate holder's manual.
4.	Review the appropriate organizational chart.

Questions		
	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder clearly identify who is responsible for the quality of the Extended Operations (ETOPS) process?	☐ Yes ☐ No, Explain Name/Title:
2.	Does the certificate holder clearly identify who has authority to establish and modify the policies, procedures, instructions and information for the Extended Operations (ETOPS) process?	☐ Yes ☐ No, Explain Name/Title:
3.	Does the certificate holder's manual include the duties and responsibilities of those who manage the work required by the Extended Operations (ETOPS) process? SRRs: 121.135(b)(2)	☐ Yes ☐ No, Explain
4.	Does the certificate holder's manual include instructions and information for those who manage the work required by the Extended Operations (ETOPS) process? SRRs: 121.135(a)(1)	☐ Yes ☐ No, Explain
5.	Does the certificate holder clearly and completely document the responsibility for this position?	☐ Yes ☐ No, Explain
6.	Does the certificate holder clearly and completely document the authority for this position?	☐ Yes ☐ No, Explain
7.	Does the certificate holder clearly and completely document its qualification standards for the person having responsibility for the Extended Operations (ETOPS) process?	☐ Yes ☐ No, Explain
8.	Does the certificate holder clearly and completely document its qualification standards for the person having authority to establish and modify the certificate holder's policies, procedures, instructions, and information for the Extended Operations (ETOPS) process?	☐ Yes ☐ No, Explain
9.	Does the certificate holder clearly and completely document the procedures for	☐ Yes

	delegation of authority for the Extended Operations (ETOPS) process?	☐ No, Explain

SAI Section 5 - Management Responsibility & Authority Attributes Drop-Down Menu
1.   Not documented.
2.   Documentation unclear.
3.   Documentation incomplete.
4.   Other.