

	<p align="center">CIVIL AVIATION AUTHORITY OF BANGLADESH Flight Standard & Regulations Division Compliance Checklist for Specific Approval-MNPS (To be attached to the SPA application and documentation)</p>	AOC number: Aircraft Type: Registration Marks: MSN
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In accordance with SPA.MNPS.100, Operations with minimum navigation performance specifications (MNPS) shall only be made if the operator has been granted a MNPS approval.

This compliance Checklist is designed to assist operators in demonstrating compliance with the applicable requirements.

An application for MNPS approval will be connected with either an application for a new AOC, an application to add a new aircraft type to an existing AOC, or an application to add MNPS approval to an aircraft type already listed on the AOC. In all cases, this Compliance Checklist should be submitted to CAAB

The CAAB reserves the right to refuse an application if this Compliance Checklist is not completed in sufficient detail, or contains inaccurate information. Please ensure that the **‘Operator’s Comments’** column is completed thoroughly, including references to operations manual entries, supporting documentation and sufficient statements to demonstrate compliance.

Requirement	Operator’s Comments	CAAB’s Comment (SAT/UNSAT)
OPERATIONAL APPROVAL		
SPA.MNPS.105		
a) Navigation equipment meets the required performance;		
b) Navigation displays, indicators and controls are visible and operable by either pilot seated at his/her duty station.		
c) Training programme for flight crew members involved in these operations has been established.		
d) Operating procedures have been established specifying.		
(1) Equipment to be carried, including its operating limitations and appropriate entries in the MEL		
(2) Flight crew composition and experience requirements		
(3) Normal procedures		
(4) Contingency procedures including those specified by the authority responsible for the airspace concerned		
(5) Monitoring and incident reporting		
AMC1 SPA.MNPS.105 (if applicable)		
a) For unrestricted operation in MNPS airspace an aircraft should be equipped with two independent LRNSs.		
b) An LRNS may be one of the following: <ul style="list-style-type: none"> (1) one inertial navigation system (INS); (2) one global navigation satellite system (GNSS); or (3) one navigation system using the inputs from one or more inertial reference system (IRS) or any other sensor system complying with the MNPS requirement. 		
c) In case of the GNSS is used as a stand-alone system for LRNS, an integrity check should be carried out.		
d) For operation in MNPS airspace along notified special routes the aero plane should be equipped with one LRNS.		

North Atlantic High Level Airspace (NAT HLA) Checklist

Requirement	Operator's Comments	CAAB's Comment (SAT/UNSAT)
Operational Documents		
SPA.MNPS.100; SPA.MNPS.105. a) Revision of the relevant parts of the Operations Manual System including checklists and Minimum Equipment List (MEL). b) Description of the relevant operating history of the operator together with the experience-level of flight crew members concerning NAT HLA operations. c) Plan for participation in verification/monitoring programmes.		
Operations Specification NAT HLA		
SPA.MNPS.100; SPA.MNPS.105. a) Is the operations specification NAT HLA mentioned in the introduction paragraph of the operations manual part A? b) Is the route-competence for NAT HLA-airspace declared? <i>Note: For flight crew members, the qualification «route-competence to operate in NAT HLA airspace must be declared in OM-A.</i>		
Flight Preparation Instruction		
SPA.MNPS.100, SPA.MNPS.105, SPA.RVSM.110 a) Does the operator describe and consider operational influence related to operations within NAT HLA airspace during his flight planning procedure? b) Are there procedures established and specific descriptions available, defining the verification procedures as well as the equipment checks required for the conduct of NAT HLA operations? c) Is a statement provided that for unrestricted operations within NAT HLA the aeroplane as well as the operator in addition must fulfill all RVSM requirements?		
Flight planning		
SPA.MNPS.100, SPA.MNPS.105, SPA.RVSM.110 a) For NAT HLA operations, instruction must be provided to the flight crew to review and verify the aircraft technical status reflected in the techlog, to consult the aeroplanes Hold Item List (HIL), to verify the aeroplane dispatch status using the Minimum Equipment List (MEL) concerning NAT HLA operations. b) Dual Long Range Navigation System (LRNS) and RNP 10 or RNP 4 capability is required.		
Flight documentation		
SPA.MNPS.100, SPA.MNPS.105, SPA.RVSM.110 a) <i>Operational Flight Plan (OFP)</i> The OFP shall be declared as master document listing sequentially all the waypoints defining the route, as well as the track and distance between each waypoint. b) <i>Plotting chart</i> The use of a plotting-chart in a suitable size and scale shall be described in order to facilitate visual presentation of the intended route and for the conduct of navigation cross-checking procedures.		

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<p>c) NAT track document</p> <p>The NAT track documents shall be described, in order to explain the procedures applicable within the Organized Track System (OTS).</p>		
Flight-deck-preparation		
<p>SPA.MNPS.100, SPA.MNPS.105, SPA.RVSM.110</p> <p>a) <i>Navigation system alignment</i> Procedures for alignment of the inertial navigation systems must be described in detail, including the position initialization procedures and the use of a satellite navigation availability program. It shall be emphasized that alignment must be completed, the equipment shall be set to NAV mode and ground speed zero indication shall be verified prior to the first movement of the aircraft.</p> <p>b) <i>LRNS functionality verification</i> Check of the functionality and accuracy of 2 Long Range Navigation Systems (2 LRNS), including the indication of the aircraft position relative to the desired track. <i>A LRNS may be one of the following:</i> <i>1 INS/IRS, or</i> <i>1 GNSS, or</i> <i>1 NAV-system using one or more IRS or any other sensor system complying with NAT HLA requirements</i></p> <p>c) <i>Loading of waypoints</i> Manual entry of waypoint data into the navigation system must be co-ordinated by two persons, working in sequence and independently. One pilot should key in and insert the data, and subsequently the other pilot should recall it and confirm it against source information. It is not sufficient for one crew member just to observe or assist another crew member inserting the data. The pilot responsible for the verification should work from the CDU display to the «master document rather than in the opposite direction in order to lessen the risk of seeing what is expected to be seen rather than to see what is actually displayed. After the verification of a waypoint, an appropriate symbol should then be adopted on the master document to indicate the status of each waypoint;</p> <p>d) <i>Checking of flight plan data in the FMS</i> Completeness of the inserted flight plan and compatibility with the master document shall be verified and calculated outputs from the system shall be reasonable and adequate.</p> <p>e) <i>Checking of Long Range Communication Equipment (HF systems)</i> Functionality check shall be defined (interval) and described clearly.</p> <p>f) <i>UTC check and synchronisation of the aircraft's masterclock</i> The masterclock of the aircraft must be synchronized with the correct time (UTC) in order to provide accurate time reference to the system for the calculation of accurate time-estimates at specific waypoints.</p>		

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NAT HLA procedures		
<p>SPA.MNPS.100, SPA.MNPS.105, SPA.RVSM.110</p> <p>a) Navigation procedures before entering NAT HLA-airspace Ground nav-aids should be used to verify performance of the LRNS to identify possible map-shifts or other discrepancies within the FMS-navigation data. In spite of all modern technology and even if the FMS is using GPS-sensors, it is still worthwhile to carry out a reasonableness check of the FMS/GPS position, using VOR/DME bearings and distances. A compass heading cross-check should be made and recorded to determine the most accurate heading source.</p> <p>b) Oceanic clearance / re-clearance procedures Two flight crew members shall listen to and record any clearance obtained from ATC in order to verify correct reception. If any doubt occurs, clarification shall be obtained from ATC without delay. If any re-clearance is obtained when temporarily only one pilot is on the flightdeck, no change in flight profile, mach number or routing should be executed, nor should the navigation- or Flight Management System be updated, until the second pilot has returned to the flight deck and a proper cross-checking and verification process can be undertaken.</p> <p>c) Clearance- and flight plan verification procedures Verification of received ATC clearance shall be crosschecked from the recorded data to the master document, not in opposite direction, in order to lessen the risk of 'seeing what is expected to be seen' rather than to see what was actually received and recorded. Same technique shall be used when checking the waypoints displayed on CDU data against the master document. After the verification, extraction and verification of the flight plan information including tracks and distance between every cleared waypoint shall take place in a co-ordinated crew procedure involving both pilots.</p> <p>d) SSR transponder operation SSR transponder code issued from controlling ATC must be retained for the first 30 minutes within the NAT HLA airspace, then transponder code "2000" shall be entered, since the original domestic code might not be recognised by the subsequent domestic radar service when exiting from oceanic airspace. Caution shall be exercised when selecting codes not to inadvertently cycle through any special code (7500, 7600, 7700) and thereby possibly initiate the launching of an interception. ACAS/TCAS operation is granted all the times.</p> <p>e) Waypoint crossing procedure Before reaching the waypoint track and distance to the next waypoint shall be verified. When crossing the waypoint it shall be verified that the new TO-waypoint becomes active and that the aircraft turns in the correct direction onto a reasonable heading and onto the predefined track. A position-plotting shall be carried out within 10 minutes.</p>		

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<p>f) Position reporting procedure (Doc 4444) Position plotting procedure</p> <p>The procedure for the preparation of a visual presentation of the intended route shall be described, which otherwise is defined only in terms of geographical coordinates. As the flight progresses in oceanic airspace, at regular intervals, actual aircraft position shall be taken out of the navigation system and then latitude and longitude coordinates shall be plotted onto the chart. When the aircraft position falls precisely on the recorded route-track, it is confirmed that the flight is following the cleared route, the navigation crosscheck is successful. Otherwise, investigation shall be conducted for the offset position of the flight and the deviation may be corrected at an early stage after the error has occurred.</p> <p>g) Turnover briefing for a relief crew or a relief crew member</p> <p>A brief description of a turnover briefing shall be provided, applicable for flights requiring crew augmentation. Its content shall particularly address critical information such as oceanic clearances, re-routings, conditional re-clearances, changes in mach-number and/or flight-level.</p> <p>h) Step climbs</p> <p>The procedure applicable for step climbs shall be described, as most NAT flights are of strategic nature whereby flights are allocated a conflict free route and profile from coast out to landfall. Such strategic clearances normally specify a single flight level for the entire crossing, without considering the basic circumstance of increasing optimum flight levels with decreasing aircraft weight. In the description of the procedure, it shall be emphasised that leaving the old and reaching the new flight level shall always be reported to ATC.</p> <p>i) Special inflight procedures (SLOP)</p> <p>A description of the lateral offset procedure shall be provided, as the distribution of aircrafts laterally adds an additional safety margin and reduces the collision risk. It shall be emphasised that aircrafts require an automatic offset programming capability, where the lateral offset of 1 or 2 nautical miles to the right of centreline can be programmed. Pilots may apply an offset procedure outbound at the oceanic entry point and must return to centreline prior to the oceanic exit point. An authorization from ATC is not required. Voice position reports shall be based on the waypoints of the current ATC clearance and not on the offset positions. Aircraft without an automatic offset programming capability have to fly on the centerline.</p>		
Contingency Procedures		
<p>a) <i>One LRNS system fails before take-off:</i></p> <ol style="list-style-type: none"> 1) Delaying departure until repair is completed. 2) Replanning of the flight below or outside NAT HLA. 3) Planning of a special route known as the «Blue Spruce Routes. 		

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<p>b) <i>One LRNS system fails before the OCA boundary is reached:</i></p> <ol style="list-style-type: none"> 1) Landing at a suitable aerodrome or returning to aerodrome of origin without crossing the NAT HLA boundary. 2) Diversion via a Blue Spruce Route. 3) Obtaining a re-clearance to fly below or outside NAT HLA. <p>c) <i>One system fails after the OCA boundary has been crossed:</i></p> <ol style="list-style-type: none"> 1) Prevailing circumstances shall be assessed such as performance of remaining system, remaining portion of the flight within NAT HLA etc. 2) Preparation of a proposal to ATC with respect to the prevailing circumstances. 3) Advise and consult with ATC as to the most suitable action. 4) Obtain appropriate re-clearance prior to any deviation from the last acknowledged oceanic clearance. <p>d) <i>Remaining system fails after entering NAT HLA:</i></p> <ol style="list-style-type: none"> 1) Immediately advise ATC. 2) Make best use of procedures specified above relating in attempting visual flight conditions and establishing contact on VHF with adjacent aircraft for useful information. 3) Keep a special look-out for possible conflicting aircraft, and make maximum use of exterior lightning. d) Obtain appropriate re-clearance prior to any deviation from the last acknowledged oceanic clearance. If no instructions are received from ATC within reasonable time, consideration to climb or descend by 500 ft, broadcasting the action on 121.5 MHz and advise ATC as soon as possible 		
Special Procedures for In-Flight Contingencies		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <ol style="list-style-type: none"> a) Are in-flight situations defined and described that imply a deviation from cleared routes in NAT HLA airspace? b) Is the basic concept described for the handling of an implied deviation from a cleared route? c) Is the contingency concept described that a flight crew has to follow when a re-clearance cannot be obtained in due time? 		
Reporting of Occurrences		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <ul style="list-style-type: none"> • Total track error of 10 NM or more; • Circumstances and contributory factors; • Deviation from assigned altitude of ± 300 ft; • The loss of NAT HLA / RVSM capability; • The application of any contingency procedure. 		
Reporting procedure		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <p>who has to file the report, (commander);</p> <p>who is receiving the report, (Manager Flight Operations/Flight Safety Officer,);</p> <ul style="list-style-type: none"> • that the report has to be filed within 72 hours after the occurrence, containing an initial analysis of causal factors and measurement taken to prevent repeat occurrence; • that the occurrence report form has to be used for the report; <p>where the corresponding form can be found within the organization.</p>		

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Aeroplane Type Specific Procedures Limitations		
SPA.MNPS.100, SPA.MNPS.105 <ul style="list-style-type: none"> The operation specification NAT HLA shall be listed together with all other operations specifications applicable for the aeroplane type concerned. Communication: CPDLC RCP240 capability shall be listed Navigation: RNP10 or RNP 4 capability shall be listed Surveillance: ADS-C RSP180 capability shall be listed 		
Normal Procedures		
SPA.MNPS.100, SPA.MNPS.105 <p>a) <i>Navigation system alignment</i> Procedures for alignment of the inertial navigation systems must be described in detail including position initialization procedures and the use of a Satellite Navigation Availability Program. It shall be emphasized that alignment must be completed, the equipment shall be set to NAV mode and ground speed zero indication shall be verified prior to the first movement of the aircraft.</p> <p>b) <i>LRNS functionality verification</i> Check of the functionality and accuracy of 2 Long Range Navigation Systems (2 LRNS) including the indication of the aircraft position relative to the desired track: 1 LRNS = 1 INS/IRS, or 1 GNSS, or 1 NAV system using one or more IRS or any other position sensor complying with NAT HLA requirements.</p> <p>c) <i>Loading of waypoints</i> Manual entry of waypoint data into the navigation system must be co-ordinated by two persons, working in sequence and independently. One should key in and insert the data, and subsequently the other should recall it and confirm it against source information. It is not sufficient for one crew member just to observe or assist another crew member inserting the data. The pilot responsible for the verification should work from the CDU display towards the master document rather than in the opposite direction in order to lessen the risk of 'seeing what is expected to be seen' rather than to see what is actually displayed. After the verification of a waypoint, an appropriate symbol should then be adopted on the master document to indicate the status of each waypoint.</p> <p>d) <i>Checking of flight plan data</i> Completeness of the inserted flight plan and compatibility with the master document shall be verified and calculated outputs from the system shall be reasonable and adequate.</p> <p>e) <i>Checking of Long Range Communication Equipment (HF systems)</i> Functionality check shall be defined (interval) and described clearly.</p>		

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<p>f) <i>UTC check and synchronisation of the aircraft's masterclock</i> The masterclock of the aircraft must be synchronized with correct UTC time in order to provide accurate time reference to the system for the calculation of accurate time estimates at specific waypoints.</p> <p>g) <i>NAT HLA/RVSM equipment check</i> The external inspection procedure shall contain all relevant equipment such as all static-ports, especially the condition of the fuselage skin around the static ports. The cockpit preparation shall include a primary altimeter crosscheck to be within a tolerance of ± 75 ft (indication versus airport elevation, when QNH is the reference). The equipment relevant for RVSM operations must be checked operational. The tech log system shall be reviewed concerning the operational NAT HLA status and RVSM capability of the aeroplane.</p>		
Altimeter setting procedures		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <p>a) The procedure for altimeter setting and checking shall be described in detail, covering all relevant aspects regarding crew coordination and crew communication (call-outs).</p> <p>b) The procedure for the transition out of a climb or descent into a straight level-flight shall be described, covering the relevant aspects in regard to the monitoring of correct operation of the altitude alerting system and the automatic altitude control system.</p> <p>c) The procedure to perform primary altimeter crosschecks and respective recording.</p> <p>d) The use of the autopilot system in relation to the respective altitude transmitting transponder.</p>		
Abnormal / Emergency Procedures		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <p>a) A description of the procedure shall be provided on how a degradation in navigation performance is recognised. Guidance and instruction shall be given on what constitutes a faulty system.</p> <p>b) The methods for determination of a faulty NAV system shall be described.</p> <p>c) Instructions and guidance shall be provided for the case that the faulty system cannot be clearly identified.</p>		
Position sensor deficiencies		
<p>SPA.MNPS.100, SPA.MNPS.105</p> <p>a) A description should be provided on how an inertial system failure can be detected.</p> <p>b) Instructions shall be provided for a satellite system failure.</p> <p>c) Procedures for the case of a satellite fault detection outage shall be described.</p>		

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Minimum Equipment List (MEL)		
SPA.MNPS.100, SPA.MNPS.105, CAT.IDE.A.105 Is the MEL amended in order to cover all system components that are relevant for the NAT HLA capability of the aeroplane?		
SPA.MNPS.100, SPA.MNPS.105 The regional operational procedures including normal and contingency procedures must be integrated in the Operations Manual Part C, covering the operator's whole area of operation as specified on the AOC. <ul style="list-style-type: none"> • Europe (EUR); • North Atlantic (NAT); • Western Atlantic Route System (WATRS); • Northern Canadian Airspace (NAM); • Domestic United States (D-RVSM); • Pacific Region (ASIA/PAC); • Middle East (MID). 		
NAT HLA Training and Checking Concept		
SPA.MNPS.100, SPA.MNPS.105 a) Is the NAT HLA training correctly integrated into both the conversion and recurrent training and checking programme? b) Is a sector included in the line flying under supervision module, where NAT HLA operation can be applied within NAT HLA airspace?		
NAT HLA Training Module		
SPA.MNPS.100, SPA.MNPS.105 Is there an NAT HLA training module integrated within the OM-D? <p>a) <i>Standard of performance to be obtained</i></p> <p>The following standards of performance shall be defined as minimum requirements to be obtained after having completed this NAT HLA training module:</p> <ul style="list-style-type: none"> • The student has obtained a thorough knowledge of the operational procedures and contingency procedures including standard ATC phraseology used in NAT HLA; • The student has conducted at least one sector during the line flying under supervision phase, where NAT HLA operation was applied. <p>b) <i>Prerequisites</i></p> <p>The candidate shall fulfil the following pre-requisites, before starting NAT HLA training:</p> <ul style="list-style-type: none"> • Vital parts of the operators manual system should have been taught to the candidate beforehand to allow an adequate overview. <p>c) <i>Interrelation with other training modules</i></p> <p>As the operation within NAT HLA is considered part of Standard Operating Procedures (SOP), NAT HLA training shall be part of the Ground Refresher Training.</p>		

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<p>d) <i>Training items (steps, lessons, sequence and detailed content)</i></p> <p>NAT HLA training is to be performed according to the information given in the key course. Theoretical instruction for initial training means: classroom instruction and/or CBT; The following items shall be covered:</p> <ul style="list-style-type: none"> • The minimum equipment requirements for NAT HLA operations; • Specific Minimum Equipment List (MEL) content; • Aeroplane automation systems; • Airframe operation restrictions, characteristics of aeroplane altitude capture systems; • Use and limitations in terms of accuracy of standby altimeters contingencies; application of static source error correction/position error correction tables; • Visual perception of other traffic; • Basic concept for normal procedures in NAT HLA; • Flight planning; • Pre-flight procedures; • In-flight procedures: - Prior to entry into NAT HLA, - within NAT HLA airspace, - TCAS / ACAS operating characteristics within MNPS; • Concepts for NAT HLA contingency procedures; • ATC phraseology applicable for NAT HLA operations. Emphasis shall be laid on re-enforcement of understanding, compliance and query in case of uncertainties; • Specific regional operational procedures and contingency procedures in accordance with the area of operation, e.g.: Europe (EUR), North Atlantic (NAT) Western Atlantic Route System (WATRS), Northern Canadian Airspace (NAM), Domestic United States (D-RVSM), Pacific Region (ASIA /PAC), Middle East (MID); • Post-flight procedures; • Entries in technical log systems; <p>Ground training and checking shall cover theoretical and practical parts of the subject (classroom) and practical training and checking shall be performed in an FSTD and/or aeroplane.</p> <p>e) <i>Checking / examination including pass mark for written tests</i></p> <p><i>Means of training and checking</i></p> <ul style="list-style-type: none"> • Theoretical knowledge will be checked by means of a written test or by any other suitable method where the quality of the transferred knowledge can be traced and recorded. Questionnaire shall comprise questions distributed appropriately across the main subjects of the syllabus. • The candidate has to pass the knowledge assessment before being entitled to undergo further practical training and checking in the aeroplane or FSTD. • During the operator proficiency check the candidate has to demonstrate adequate knowledge regarding operation in NAT HLA. • Flight crew has to demonstrate their competence in carrying out normal operations within NAT HLA. Therefore, as NAT HLA operation is an integral part of standard operating procedures, proficiency and knowledge shall also be assessed during the line check. 		

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<p>f) <i>Training and checking personnel required / involved</i></p> <p>All necessary training and checking personnel involved in training and checking as listed below have to be incorporated in the operators OM-D, Training and Checking Personnel before being entitled to execute the privileges.</p> <ul style="list-style-type: none"> • Classroom practical and theoretical training and checking is to be given by a Technical Knowledge Instructor (TKI), Training Captain (TC) or a Type Rating Instructor (TRI). • Training on an FSTD shall be given by a SFI/TRI. • Training on an aeroplane during LIFUS shall be given by a TC or a TRI. • Checking of practical NAT HLA application during OPC shall be performed by a TRE. • Checking of practical NAT HLA operation during initial and/or regular line checks shall be conducted by a Training Captain (TC) or TRE. <p><u>Subcontracted Training Organisations</u></p> <p>Reference to subcontracted training organisations, listed in OM D; shall be made, if applicable.</p> <p>g) <i>Reference to syllabi and lesson plan</i></p> <p>The operator shall state all references where a specific NAT HLA training syllabus and associated lesson plan can be found within the operators OM-D.</p>		

I, hereby certify that the above compliance statement is a true reflection of the training, equipment, processes and procedures of company

Signed: Date:

Position in company: