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The purpose of North Atlantic Operations Bulletin 2020_001 is to provide background information and guidance material for flight crews to support the use of the ACARS data link oceanic clearance procedures in the NAT supported by Gander, Reykjavik, Bodo, Shanwick and Santa Maria.

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NAT OPERATIONS BULLETIN – ACARS DATA LINK OCEANIC CLEARANCE FLIGHT CREW PROCEDURES

CONTENTS

1. Abbreviations
2. Introduction
3. Connecting to System
4. Requesting a Clearance
5. Clearance Delivery
6. Clearance Negotiation
7. Clearance Acknowledgement
8. Reclearances
9. RCL/CLA Errors
10. Terms used in the ATC/Line
11. Flight Crew Checklist
12. Examples of ACARS Data Link Oceanic Clearances

1. ABBREVIATIONS

| | |
|--------|--|
| ACARS | Aircraft Communications, Addressing and Reporting System |
| AFIS | Aerodrome Flight Information Service |
| AGCS | Air Ground Communications System |
| ATC | Air Traffic Control |
| CLA | Clearance Acknowledgement downlink message |
| CLRD | Cleared |
| CLRNCE | Clearance |
| CLX | Oceanic Clearance uplink message . |
| F | Flight Level |
| FM | From |
| FMC | Flight Management Computer |
| HLA | High Level Airspace |
| M | Mach |
| MNTN | Maintain |
| NAT | North Atlantic |
| OCA | Oceanic Control Area |
| OCNCLX | ACARS Oceanic Clearance Uplink |
| OEP | Oceanic Entry Point |
| OTS | Organized Track System |
| RCL | Request for Clearance downlink message |
| TMI | Track Message Identifier |

2. INTRODUCTION

- 2.1 This NAT Ops Bulletin consolidates and updates information pertaining to ACARS data link oceanic clearance services provide by Gander (CZQX) Reykjavik (BIRD), Bodo (ENOB), Shanwick (EGGX), and Santa Maria (LPPO), that was previously contained within individual ANSP NAT OPS Bulletins.
- 2.2 The ACARS Data link oceanic clearance service is provided by means of VHF and satellite to ACARS equipped aircraft via communications service providers ARINC and SITA. It should not be confused with FANS 1/A CPDLC. Operators intending to participate in the ACARS data link process are required to contact their communications service provider and indicate that they would like to receive the service.
- 2.3 Procedures for flights intending to receive an unsolicited clearance or that are not capable of sending a Request for Clearance (RCL) downlink message via ACARS data link entering Gander oceanic are included in Attachment A.

3. CONNECTING TO SYSTEM

- 3.1 Populate ACARS logon with the appropriate flight number and OCA facility.

4. REQUESTING A CLEARANCE

- 4.1 Enough time should be allowed to request, receive, and understand the oceanic clearance (or amended clearance) well before reaching the OEP.

Note: (Shanwick) Flights must not enter without an oceanic clearance.

- 4.2 Flight crews should send an RCL via ACARS. ATC cannot reply to an RCL with any message other than a CLX.
- 4.3 The call sign in the RCL must match the aircraft identification as contained in the ICAO flight plan or the RCL will be rejected.
- 4.4 The RCL must contain all the following information:
- Oceanic Entry Point (OEP)
 - ETA for the OEP
 - Requested Mach Number
 - Requested Flight Level
 - The highest acceptable Flight Level which can be attained at the OEP (via free text)
 - If higher than requested is acceptable; provide the highest acceptable altitude as MAX
 - Example: Requesting FL360 - enter free text MAX F380
 - If requested is the highest acceptable; provide the requested altitude as MAX
 - Example: Requesting FL360 - enter free text MAX F360

4.5 The RCL should be sent in accordance with the following table;

| OCA | | Prior to OEP |
|------------------------------|------------------------|---|
| Gander, Shanwick, and Bodo | | 90-30 minutes |
| Santa Maria | | At least 40 minutes |
| Reykjavik (entering from) | Stavanger and Scottish | 25 minutes |
| | Murmansk | 30 minutes* |
| | Edmonton | 45 minutes* |
| | | Rule of thumb for Reykjavik 20-25 minutes |

* Due to coverage limitations, aircraft equipped with Inmarsat data link won't be able to obtain an oceanic clearance via ACARS data link when north of 82°N. Aircraft equipped with Iridium and/or HF ACARS data link should be able to obtain an oceanic clearance via ACARS data link regardless of location.

Note: (Gander) Flight crews in receipt of an ACARS data link oceanic clearance from Gander OCA while in the New York OCA but subsequently routing through Gander Domestic airspace before re-entering the NAT HLA, should not modify the FMC prior to exiting the New York OCA. Modifications in accordance with the oceanic clearance should be executed while within Gander Domestic airspace.

Note: (Reykjavik) If the flight planned route does not contain a waypoint on the Reykjavik OCA boundary then the Entry Point should be the next flight plan waypoint before the Reykjavik OCA boundary. In such cases the entry point in the Oceanic Clearance (CLX) message will be a system calculated boundary crossing point and this change will be highlighted with the text "ENTRY POINT CHANGE <position>" in the ATC/ line. Exceptions to this are the waypoints EPMAN, DARUB, JULET and LT.

4.6 A significant delay or complete failure to send the RCL may result in the flight not receiving an ACARS data link oceanic clearance. The oceanic clearance will then have to be requested via voice.

Note: (Gander) Flights departing from airports less than 45 minutes flying time from the OEP should request clearance 10 minutes prior to start up.

Note: (Gander) Under some circumstances, an ACARS data link oceanic clearance may be received prior to the RCL being sent.

Note: (Reykjavik) The ACARS data link oceanic clearance is not available for flights departing from airports in Iceland, Greenland and the Faroe Islands. The oceanic clearance to those flights is delivered by the appropriate Control Tower or AFIS before departure.

Note: (Shanwick) Due to the short flying times between Scottish and Irish aerodromes and the Shanwick OCA boundary, pilots may be required to request and receive an Oceanic Clearance prior to departure. (Details contained with UK AIP)

Note: (Santa Maria) A RCL is not required for flights departing from airports in the Azores either via data-link or voice. The oceanic clearance to those flights will be provided by ATC via Santa Maria Radio, VHF or CPDLC route confirmation before leaving surveillance coverage.

4.7 The following message indicates that the RCL has been received:

| OCA | RCL RECEIVED |
|----------------------------------|--|
| Gander | IF NO CLEARANCE RECEIVED WITHIN 30 MINUTES OF OCEANIC ENTRY POINT REVERT TO VOICE PROCEDURES END OF MESSAGE. |
| Reykjavik Bodo Santa Maria | IF NO CLEARANCE WITHIN 15 MINUTES REVERT TO VOICE PROCEDURES |
| Shanwick | IF NO CLEARANCE WITHIN 15 MINUTES CONTACT SHANWICK BY VOICE |

4.8 If the appropriate message listed above is not received within 5 minutes of sending the RCL, the flight crew should request the clearance via voice. Clearance readback must include the TMI if on the OTS.

Note: (Shanwick) A second attempt to send an RCL can be made. If an RCL is invalid or incomplete, ATC will send an advisory message with instruction.

4.9 If the call sign in the ACARS data link oceanic clearance is not correct, the clearance is not valid. The flight crew must request the oceanic clearance via voice and include the TMI in the clearance readback if on the OTS.

4.10 If the ACARS data link oceanic clearance is not received within the times listed above, the flight crew must request the oceanic clearance via voice

5. CLEARANCE DELIVERY

5.1 ACARS data link clearances contain full route coordinates. Clearances on an OTS Track also include the Track Identifier e.g. ALPHA, BRAVO etc.

5.2 Flight crews must check that the route coordinates received match the full Lat/Long coordinates loaded in the FMC. If on the OTS, also check that they agree with the current NAT track message. Query any discrepancies using voice procedures.

Note: (Gander) If an ACARS data link clearance must be confirmed by voice, contact Gander Clearance Delivery between the hours of 2330z-0730z (DST 2230z-0630z), when within 200NM of a Gander clearance delivery frequency as published in the OTS Track Message. Outside of these hours or when the flight will not pass within 200NM of a published frequency, contact the current controller

5.3 The flight level contained in the ACARS data link oceanic clearance is the “cleared oceanic flight level” for the purposes of complying with the lost communication procedures detailed in State AIPs, ICAO Doc 7030 (North Atlantic Regional Supplementary Procedures) and NAT Doc 007. ATC is responsible for providing a clearance to enable the flight to reach this flight level before reaching the OEP. If there is a concern, flight crews should contact ATC.

Caution: The flight level contained in the ACARS data link oceanic clearance IS NOT a clearance to climb. Flight crews must request ALL level changes with ATC and not change flight level upon the receipt of the oceanic clearance.

5.4 The ACARS data link oceanic clearance may include a reroute to an OEP which is different from the current cleared route and/or may specify an OEP which is different from the flight plan. In all cases,

flights should continue to operate in accordance with the current cleared route until a verbal reclearance is received from ATC.

Caution: Upon receipt of a revised oceanic clearance (i.e., one not conforming to the flight planned route), both pilots must independently verify the full latitude and longitude coordinates of “un-named” (Lat/Long) waypoints defining the route contained in the revised oceanic clearance.

- 5.5 If the clearance does not contain the line END OF MESSAGE (which could be on a subsequent page), it is possible that the clearance was not complete. Flight crews must verify the clearance via voice and include the TMI if on the OTS.

Note: (Shanwick) ACARS data link will not be used to issue clearances when aircraft is estimated to be within 15 minutes from the OCA boundary.

6. CLEARANCE NEGOTIATION

- 6.1 Upon receipt of the RCL, the controller may issue an ACARS message instructing the flight crew to contact ATC by voice to negotiate the clearance requirements with the crew.
- 6.2 Amendments to the ACARS data link oceanic clearance should be requested via voice. Flights equipped to send an RCL should send one before requesting the amendment via voice.

Note: (Gander) Amendments to the ACARS data link oceanic clearance should be requested by contacting Gander Clearance Delivery.

7. CLEARANCE ACKNOWLEDGEMENT

- 7.1 When the ACARS data link oceanic clearance is received, flights equipped to send a Clearance Acknowledgement (CLA) should do so. Flights not equipped to send a CLA must acknowledge the ACARS data link oceanic clearance via voice.

Note: (Shanwick) If no CLA is received within 10 minutes of sending the CLX, ATC will advise the crew CLEARANCE CANCELLED REVERT TO VOICE PROCEDURES.

- 7.2 The following message indicates that the ACARS data link oceanic clearance process is complete and that no further action is required by the flight crew to acknowledge or verify the oceanic clearance:

- *CLA RECEIVED CLEARANCE CONFIRMED END OF MESSAGE.*

- 7.3 If this message is not received within 5 minutes of sending the CLA, then the ACARS data link oceanic clearance must be verified via voice and include the TMI if on the OTS.
- 7.4 If unable to send a CLA or a CLA error message is received, the ACARS data link oceanic clearance must be verified via voice and include the TMI if on the OTS.

7.5 When verifying an ACARS data link oceanic clearance via voice the following information must be provided:

- ETA for the OEP;
- Cleared oceanic route: Track identifier (e.g. Track C) if on the OTS, or full route coordinates if on a Random;
- Cleared oceanic flight level;
- Cleared Mach number; and
- NAT TMI (e.g. TMI 157 if on the OTS)

8. ATC/ REMARKS

8.1 The ATC/ line will list which item (or items) of the clearance was changed from the previously issued clearance (or if the item is different from that requested). The terms used in the ATC/ line are explained below.

| | |
|---------------------------------------|--|
| Level Change | Clearance is at a level different from that requested or previously cleared. |
| Mach Change | Clearance is at a speed different from that requested or previously cleared. |
| Entry Point Change | Clearance is via an Entry Point different from that requested, or previously cleared. |
| Route Change | The route contained is a change from the filed flight plan or the route in the reclearance is different from the previously issued clearance Note: If the previously issued clearance was on a NAT TRACK, the route description may change to RANDOM ROUTE, or vice versa depending on depending on the reclearance.” |
| Route Amendment | The route in the clearance is different from the route in the flight plan. |
| Route Change At {Position} | Clearance is via a single route point different from that requested or previously cleared. |
| Route Change at Multiple Route Points | Clearance is via a route that has two or more points different from that requested or previously cleared. |
| Request Level Change At {Position} | Pilot should request a level change at point specified. |
| Unable to Approve Request | Shanwick unable to approve request for change to clearance. This Reclearance should be a copy of the previous clearance. Flight crews should check for any discrepancy or ATC/ field information. |
| Clearance Limit | The clearance limit in the clearance is different from the destination in the flight plan. |

9. RECLEARANCES

9.1 When an ACARS data link oceanic clearance is amended, it will include the ATC/ line and the RECLEARANCE line.

9.2 The RECLEARANCE line will contain a number from 1 to 9, to identify the first and subsequent reclearances. Reclearances may not be numbered consecutively, but the latest reclearance will always have a higher number.

9.3 All reclearances must be acknowledged. The CLA should be sent for the clearance with the highest RECLEARANCE number.

- 9.4 If the reclearance does not contain the line END OF MESSAGE, it is possible that the clearance was incomplete. Flight crews must verify the clearance via voice and include the TMI if on the OTS.
- 9.5 Revert to voice if there is any doubt as to the oceanic clearance.

10. RCL/CLA ERRORS

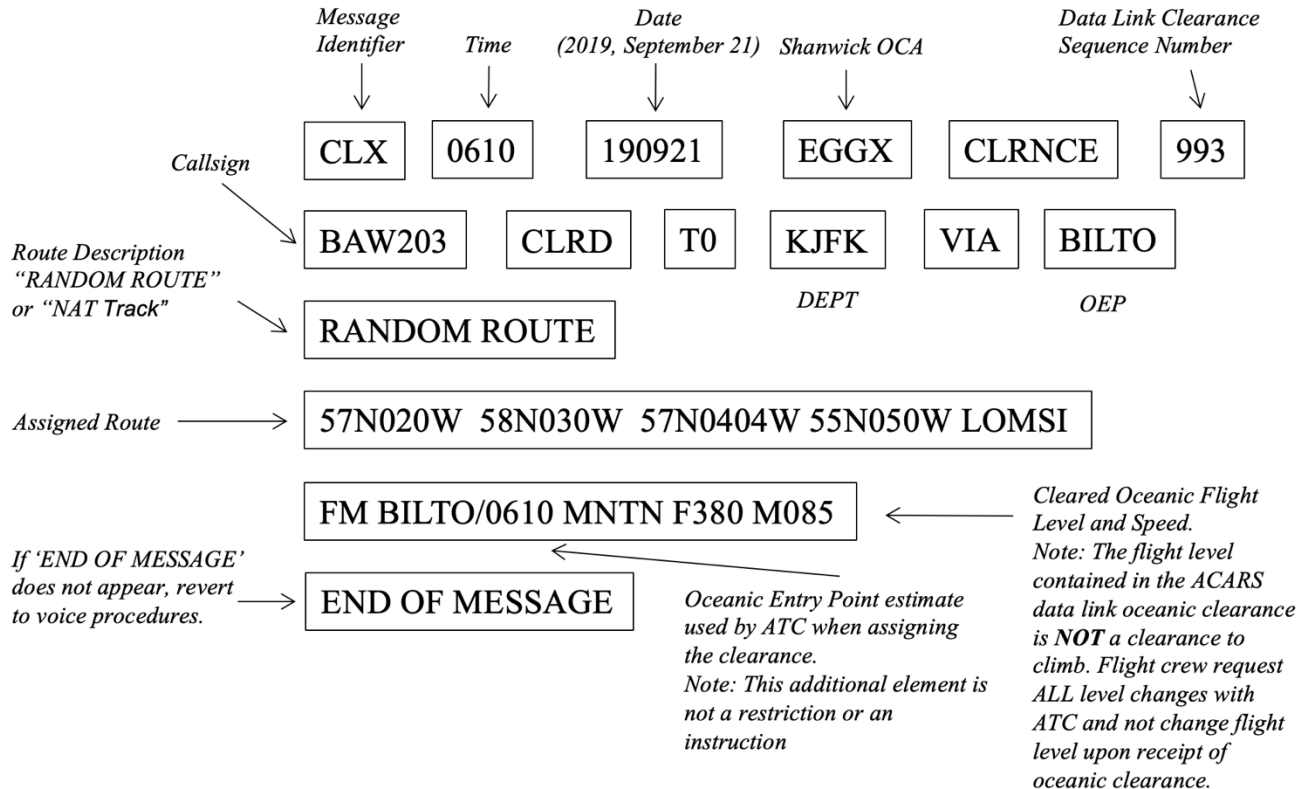
| Message | Flight Crew Action |
|--|---|
| RCL REJECTED RCL SENT TOO EARLY | Check the ETA, and re-request at the correct time. |
| RCL REJECTED RCL RECEIVED TOO LATE REVERT TO VOICE PROCEDURES | Clearance request received less than 30 minutes prior to the boundary. Check ETA. If less than 30 minutes from the boundary, OCL cannot be used. Contact OCA by voice immediately. If more than 30 minutes from the boundary, amend ETA and resubmit RCL. |
| RCL REJECTED REQUEST BEING PROCESSED AWAIT TRANSACTION COMPLETION | Await clearance issued on the basis of the original RCL, then input new RCL if required. |
| RCL REJECTED FLIGHT PLAN NOT HELD | Check that the correct callsign was used. Amend and re-request or contact via voice |
| RCL REJECTED REGISTRATION DOES NOT MATCH FLIGHT PLAN REVERT TO VOICE PROCEDURES | Revert to voice |
| RCL REJECTED MULTIPLE FLIGHT PLAN HELD REVERT TO VOICE PROCEDURES | Revert to voice |
| RCL REJECTED INVALID <Callsign, Mach No, Level, OEP> RESUBMIT YOUR REQUEST | Check the identified error, amend and re-submit the RCL. |
| (CLA or) RCL REJECTED ERROR IN MESSAGE | An error has been detected and further datalink communication should not take place. Revert to voice |
| RCL REJECTED INVALID REGISTRATION REVERT TO VOICE PROCEDURES | Revert to voice |
| RCL REJECTED CALLSIGN ALREADY IN USE | Revert to voice |

| Message | Flight Crew Action |
|--|---|
| RCL REJECTED NETWORK CONGESTION REVERT TO VOICE PROCEDURES or RCL REJECTED OCL SERVICE NOT CURRENTLY AVAILABLE REVERT TO VOICE PROCEDURES or RCL (or CLA) REJECTED GROUND SYSTEM ERROR REVERT TO VOICE PROCEDURES | A network or ground system error has been detected. Revert to voice |
| RCL RECEIVED (OCA) CLEARANCE NOT ACKNOWLEDGED SEND DATALINK ACKNOWLEDGEMENT NOW | Clearance Acknowledgement has not been received. Acknowledge clearance by datalink now. Failure to do so will result in transaction termination. |
| RCL REJECTED TRANSACTION TIMEOUT REVERT TO VOICE PROCEDURES | Acknowledgement has not been received. Clearance is not valid. |
| RCL/CLARECEIVED NEGOTIATION REQUIRED CONTACT SHANWICK BY VOICE | Negotiation is required, or communications problems encountered. Contact Shanwick by voice immediately. Anticipate that clearance will be issued via datalink. |
| RCL/CLA REJECTED CLEARANCE CANCELLED REVERT TO VOICE PROCEDURES | Invalid CLA received at OCL. Transaction failed. Contact Shanwick by voice immediately. OR A Reclearance message has not been delivered. The current clearance may not be valid. Contact Shanwick by voice immediately. |

11. FLIGHT CREW CHECKLIST

| | |
|----|--|
| 1 | Complete ACARS logon |
| 2 | Send the RCL |
| 3 | Ensure confirmation message is received |
| 4 | If error message received, revert to voice |
| 5 | Receive ACARS data link oceanic clearance |
| 6 | Confirm call sign in clearance matches the call sign in the flight plan |
| 7 | Confirm that route coordinates match the full Lat/Long coordinates in the FMS and on the NAT Track Message (if on the OTS) |
| 8 | Send CLA |
| 9 | Ensure confirmation message is received |
| 10 | If error message received, revert to voice |

12. EXAMPLE OF ACARS DATA LINK OCEANIC CLEARANCES



Example 1 – clearance on a NAT track

CLX 1259 060224 CZQX CLRNCE 026
ABC123 CLRD TO LFPG VIA NEEKO
NAT W
NEEKO 54N050W 56N040W 57N030W 57N020W PIKIL SOVED FM NEEKO/1348 MNTN F330 M082
END OF MESSAGE

Example 2 – clearance on a random route

CLX 1523 060530 CZQX CLRNCE 118
ABC456 CLRD TO EGLL VIA TUDEP
RANDOM ROUTE
TUDEP 52N050W 53N040W 53N030W 52N020W LIMRI DOLIP FM TUDEP/1632 MNTN F350 M080
END OF MESSAGE

Example 3 – reclearance from the clearance in Example 1

CLX 1325 060224 CZQX CLRNCE 097
ABC123 CLRD TO LFPG VIA NEEKO
RANDOM ROUTE
NEEKO 54N050W 55N040W 56N030W 57N020W PIKIL SOVED FM NEEKO/1430 MNTN F340 M082
ATC/ ROUTE CHANGE LEVEL CHANGE RECLEARANCE 1
END OF MESSAGE

Example 4 – reclearance from the clearance in Example 2

CLX 1558 060530 CZQX CLRNCE 135
ABC456 CLRD TO EGLL VIA TUDEP

RANDOM ROUTE

TUDEP 52N050W 53N040W 53N030W 52N020W LIMRI DOLIP FM TUDEP/1702 MNTN F350 M082
ATC/ MACH CHANGE RECLEARANCE 1 END OF MESSAGE

Example 5 – reclearance from the clearance in Example 4

CLX 1605 060530 CZQX CLRNCE 149

ABC456 CLRD TO EGLL VIA TUDEP

RANDOM ROUTE

TUDEP 52N050W 52N040W 53N030W 52N020W LIMRI DOLIP FM TUDEP/1711 MNTN F350 M082
ATC/ ROUTE CHANGE RECLEARANCE 2 END OF MESSAGE

ATTACHMENT A - GANDER ONLY – UNSOLICITED OCEANIC CLEARANCES – NO RCL

Gander provides a service specific to aircraft not equipped to send an RCL. This service needs to be set up in advance with your communication service provider and NavCanada. Aircraft registration occurs twice per month on the 1st and 15th day.

- 1.1 Procedures for flights intending to receive an unsolicited clearance or that are not capable of sending a Request for Clearance (RCL) downlink message via ACARS data link should include 'AGCS' in field 18 of the ICAO flight plan.
- 1.2 Flights not equipped to send an RCL must complete the ACARS logon and expect a clearance automatically in Gander's airspace.
- 1.3 Flights not equipped to send an RCL, but equipped to receive an ACARS data link oceanic clearance should:
 - Include 'AGCS' in field 18 of the ICAO flight plan; and
 - Expect to receive their ACARS data link oceanic clearances automatically. If the ACARS data link oceanic clearance is not received within the time limits listed above, the oceanic clearance must be requested via voice
- 1.4 Departures from Gander (CYQX), Goose Bay (CYYR), and St. John's (CYYT); oceanic clearance will be sent at the same time or with a departure clearance.

- **END** -