# Advanced Passenger Information

# Macao Compliance and Implementation Guide – UN/EDIFACT PAXLST

Version: 1.1.0
Status: Release
Date: 16/01/2023

Public Security Forces Affairs Bureau of Macao

Public Security Police Force of Macao

# Document Control

| **Security level** | Unclassified | | |
|---|---|---|---|
| **Authority** | Public Security Forces Affairs Bureau of Macao<br>Public Security Police Force of Macao | | |
| **Version** | **Date** | **Change/Comment** | **Location in Document** |
| 1.0.0 | 10/08/2022 | First Release | |
| 1.1.0 | 16/01/2022 | Second Release | 5.23 |
| | | | |

# Table of Content

# 1 Introduction

## 1.1 Background

Under the backdrop of increasing international air traffic and on-going global health and safety concerns, Public Security Forces Affairs Bureau of Macao and Public Security Police Force of Macao (PSP) is acting to streamline passenger border control and clearance process to make it more intelligent and efficient.

## 1.2 Objectives

This aim of this document is to inform airlines that operate all flights to airports in Macao, about the Advance Passenger Information (API) requirements. The document covers Compliance Ruling, Implementation Guidelines and Technical Requirements Guidelines to be used by airline operators in collecting above information for PSP.

## 1.3 Terminology

To better understand the document, the terminology used herein is presented in the table below.

Table 1 Terminology

| Item | Terms / Acronyms | Definitions and interpretations |
|---|---|---|
| 1. | API | Advanced Passenger Information |
| 2. | APIS | Advanced Passenger Information System: This is a system for airline operators to transmit data to the APIS system. |
| 3. | ARINC | Aeronautical Radio Incorporated |
| 4. | EDI | Electronic Data Interchange |
| 5. | IATA | International Air Transport Association |
| 6. | ICAO | International Civil Aviation Organization |
| 7. | UN/EDIFACT | United Nations/Electronic Data Interchange for Administration, Commerce, and Transport |
| 8. | PAXLST | Passenger List: This is a UN/EDIFACT standard message for relaying data of passengers and crew members |
| 9. | STA | Scheduled Time of Arrival |
| 10. | STD | Scheduled Time of Departure |
| 11. | WCO | World Customs Organization |
| 12. | Macao Airports | Macao International Airport<br>Others (Heliports) |

## 1.4 References

Table 2 List of reference documents

| Item | Name |
|---|---|
| 1. | WCO/IATA/ICAO Passenger List Message (PAXLST) Implementation Guide |
| | |

# 2 Compliance and Operations Guide

## 2.1 Legal Aspects

The legal obligation for commercial airlines to collect and provide API data to PSP is based on the following legislation:

Lei n.º 16/2021，Regime jurídico do controlo de migração e das autorizações de permanência e residência na Região Administrativa Especial de Macau.

The details of the Acts can be found in Macao government website:

https://bo.io.gov.mo/bo/i/2021/33/lei16.asp#16

Regulamento Administrativo n.º 47/2022, Regras complementares relativas ao Sistema de Informação Antecipada de Passageiros.

https://bo.io.gov.mo/bo/i/2022/44/regadm47.asp#47

If Airlines fail to declare according to the rules, Airlines need to take the corresponding legal responsibility.

## 2.2 Type of Flights Covered

The above legislation allows the PSP to request organizations, individuals who carry on business or non-business of international civil aviation transport (collectively called as the Airlines:

1. departing from a place outside the territory of Macao (inbound flight)
2. Flights to Macao under other circumstances

API information is required for following types of carriers:

1. Scheduled carriers (passengers and crew)
2. Cargo carriers (crew)
3. Unscheduled carriers (Passengers and crew)

Code sharing flight or funnel flight should be summitted only by the operating carrier and the message should not use the marketing flight code and flight number.

## 2.3 Transmission Timings

API data must be submitted to PSP immediately after the completion of the passenger check-in process, according to the provisions of Law No.
16/2021. Transmission Responsibility “The Obligation of Transport Carriers to Provide Information”

The airline operating the flight is responsible for collecting and sending the data, the flight number must be that of the operating airline.

## 2.4 Transmission Methods

PSP receive API messages through the telecommunication network operated by ARINC.
API data sent to the PSP's addresses MFMAPXH and MFMATXH should therefore be routed through ARINC's network, in messaging traffic known as Type B.
The IATA address of the API production system is: **MFMAPXH**
The IATA address of the API test system is: **MFMATXH**
In exceptional circumstances (e.g., system or network failure), the API data may be sent by API portal. The web site address is https://apis.fsm.gov.mo/.
Airlines need to register online with corporate domain name email address

## 2.5 Transmission Format

API should be sent using the IATA message format as UN/EDIFACT PAXLST D05B as defined by ICAO, IATA and WCO standard.
As a general rule, the WCO/IATA PAXLST specification is applicable. However, in order to meet the technical and legal provision for the API system, some additional requirements beyond those specified in PAXLST are presented in this document. In particular, these refer to whether certain attributes are conditional (optional) or mandatory. The requirements specified in this document take precedence over the PAXLST specification.

**Permitted character sets**

The messages use US-ASCII character sets, and only uppercase letters [A-Z], digits character [0-9], space, and special characters defined in UNA segment are permitted in PAXLST messages.

## 2.6 Correction Function

Air carriers who wish to make a correction or addition to some parts of the API data that has already been submitted should do so by re-transmitting the whole API after making necessary corrections or additions.

## 2.7 Duplicated and Erroneous Message Submissions

In order to eliminate unnecessary processing, the authorities seek airlines' help to proactively reduce needless and erroneous message traffic.

Message syntax rules described in this document must be followed. This includes mandatory values for specified data elements and coding practices for groups of data segments. Transmissions that fail to follow these rules and practices may be rejected by the system.

### 2.8 Confirmation of Receipt

The sender could login in API portal and query each flight API messages' process status. If the flight API messages are received and successfully processed by PSP API system, the flight will have a confirmation receipt code in API portal.

### 2.9 Data Quality

When one flight API messages are malformed, the API portal will provide message error reason.

## 3 Implementation Guide

The implementation guide explains the processes and procedures for aircraft operators to follow to comply with the API requirements for PSP.

### 3.1 Implementation Plan

Each airline must go through the necessary flight API message test. If the test is passed, PSP will send a test-passing email to the airline.

After testing procedures is completed, airline should send API messages to production address.

### 3.2 Project Communications

If airline needs consultation during application implementation or operation phase, please contact admin_apis@fsm.gov.mo.

### 3.3 Testing

Successful implementation is dependent on the ability to conduct system and operational testing between PSP and aircraft operators prior to cutover. Cutover is defined as the time when the aircraft operator and PSP initiate production operations. Testing will be performed based on the technical specifications specified in the next section. Testing will consist of connectivity testing and correct message and data formats testing.

**Testing procedure in brief**

1. Airline should register the API portal; the website address is https://apis.fsm.gov.mo/.
2. Airline should send several flights API messages to MFMATXH and make sure that all test flights override necessary test paths, and each flight API message test result can be queried on the website (https://apis-psp-uctest-pre.fsm.gov.mo/).
3. After all the test flights API messages are passed and confirmed by airline and PSP, PSP will inform airline that the API test is completed successfully. Reference 3.1, Please wait the notice from PSP after finished test.

## 3.4 Production Readiness

This will be coordinated with individual airlines through PSP project team. Aircraft operator should confirm they have the necessary standard operating procedures and policies established.

When airline receive a test-passing notification mail, airline should send API messages to production address as soon as possible before the deadline.

The IATA address of the API production system is: **MFMAPXH**

# 4 Technical Requirements for Implementation

## 4.1 Data Requirements

This section describes the data elements which must be present in the API sent by each carrier.

In accordance with section 8 of the Guidelines on Advance Passenger Information, WCO/IATA/ICAO, 2016 we can divide the information into two essential blocks:

- **Flight data (data header)**, information which establishes the characteristics of each flight (flight identification, anticipated date of embarkation etc.) and which must be available in the systems of each carrier.
- **Traveler data (data item)**, information which corresponds to the data contained in the official travel document.

Below is a description of the mandatory and optional data elements for each block of information to be sent.

### 4.1.1 Data Relating to the Flight

| | Data Element | Mandatory |
|---|---|---|
| 1 | Flight Identification<br>(IATA Airline Carrier Code and Flight no.) | ☑ |
| 2 | Scheduled Departure Date and Time<br>(Plane departure date/time based on the local time of origin) | ☑ |
| 3 | Scheduled Arrival Date and Time<br>(Plane arrival date/time based on the local time of destination) | ☑ |
| 4 | Place of Aircraft Departure<br>(For inbound flight, the place is the aircraft take-offs from the last place of departure of aircraft before the aircraft arrives in Macao. For outbound flight, the place is in Macao) | ☑ |
| 5 | Place of Aircraft Arrival<br>(For inbound flight, the place is in Macao. For outbound flight, the place is destination of the flight outside Macao) | ☑ |
| 6 | Number of Passengers/Crew<br>(Total number of passengers/crew on flight) | ☑ |

### 4.1.2 Data Relating to the Passenger/Crew Member

| | Data Element | Mandatory |
|---|---|---|
| 1 | Official Travel Document Number<br>(Number of passport or other official travel document) | ☑ |

| | | |
|---|---|---|
| 2 | Issuing State or Organization of the Official Travel Document<br>(Name of the State or Organization responsible for the issuance of the official travel document) | ☑ |
| 3 | Official Travel Document Type<br>(Indicator identifying travel document type) | ☑ |
| 4 | Expiry Date of Official Travel Document<br>(Expiry date of the official travel document) | ☑ |
| 5 | Surname/Given name(s)<br>(Family name and given name(s) in accordance with that stated in the official travel document) | ☑ |
| 6 | Nationality<br>(Nationality of the holder) | ☑ |
| 7 | Date of Birth<br>(Date of birth of the holder) | ☑ |
| 8 | Gender<br>(Gender of the holder) | ☑ |
| 9 | Party Identifier/Traveller's Status<br>(Indicator of person to be passenger, crew, in-transit passenger, in-transit crew) | ☑ |
| 10 | Passenger Itinerary: Place Embarkation<br>(Place/port where traveller originates travel) | ☑ |
| 11 | Passenger Itinerary: Place of Debarkation<br>(Place/port where traveller is traveling to) | ☑ |
| 12 | Telephone number | Optional |
| 13 | Email | Optional |
| 14 | Fax | Optional |
| 15 | Passenger Name Record Locator | Optional |
| 16 | Unique Passenger Reference | Optional |
| 17 | Passenger Seat Assignment | Optional |
| 18 | Optional Information<br>Issuing date of the official travel document | Optional |

## 4.2 Message Structure for the PAXLST Message

The UN/EDIFACT format consists of a segment message with 4 hierarchical levels. The basic concept of the PAXLST message is that there is one message for all passengers on the specified flight and there is another message for the crew members on that flight. The messages may be transmitted separately or combined into one transmission.

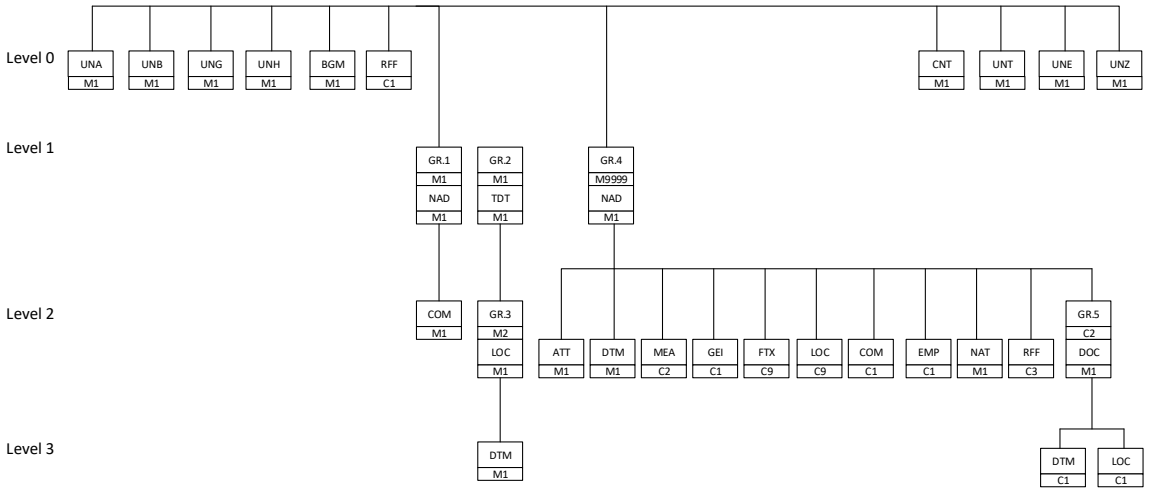


Table 3 PAXLST Message Structure

“M” indicates the segment is mandatory. “C” indicates the segment is conditional.
The number after “M” or “C” is the maximum number of times the segment may occur in a message.

### Characteristics of data group

Each data group is given the properties of mandatory or optional as well as the max number of times to be used. The PAXLST message must be built in accordance with instructions given herein to avert invalid data parsing and failed API data retrieving.

## 4.3 Multi-part API messages

API messages transmitted via Type B messaging are subject to a size limitation. If this maximum is exceeded, the API message will be split into several parts (multi-part API message. The following rules apply for multi-part API messages:

1. Each message-part must contain a complete set of the following header and trailer segments:
    - UNA Service String Advice
    - UNB Interchange Header
    - UNG Functional Group Header
    - UNH Message Header
    - BGM Begin of Message
    - CNT Control Total
    - UNT Message Trailer
    - UNE Functional Group Trailer
    - UNZ Interchange Trailer
2. Each message-part must contain the complete header data for the flight.
3. The following elements must be the same for all parts of a multi-part API message:
    - "Date and Time" elements in the UNB Interchange Header segment
    - "Interchange Control Reference" in the UNB Interchange Header segment
    - "Common Access Reference" in the UNH Message Header segment
    - Means of Transport Journey Identifier" in the TDT Transport Information segment.
4. The individual parts of a multi-part API message must be numbered sequentially (01, 02, 03, etc.) in the Sequence of Transfers element of the UNH Message Header segment.
5. The first part of a multi-part API message should be marked with a "C" in the "First and Last Transfer" element of the UNH Message Header segment. The final part should be marked with an "F". For all intermediate parts, the First and Last Transfer element is not used.
6. In the CNT Control total segment, the total number of passengers on the flight must be specified in all parts (and not just the number of passengers in that part of the message).
7. The data concerning an individual passenger may not be split over several messages.
8. Individual message-parts must not be sent more than once.
9. An API message is deemed to have been submitted only after all the individual parts have been received.

# 5 Segment Descriptions

## 5.1 UNA: Service String Advice

Function: Define delimiters used for separating data or special character for tag marker. If this tag is used, it must be placed at the beginning of the entire message and before the UNB segment.

Usage: Conditional

Example: UNA:+.?'

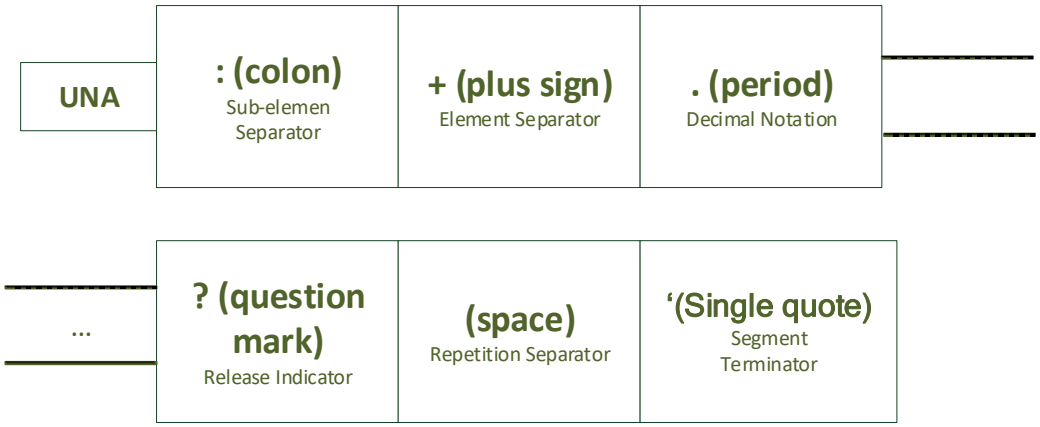


Figure 1 UNA Data Structure

**Note:**

- If the UNA segment does not exist, the above mentioned default delimiters are used.
- If the escape character is followed by a delimiter, then the latter one is treated as a normal character.
- Blank space in data element is not treated as delimiters.

## 5.2 UNB: Interchange Header

Function: Identify a data message exchange or syntax.

Usage: Mandatory

Example: UNB+UNOA:4+FOOBAR AIRLINES:ZZ+MFMAPI:ZZ +

100112:0900 + 000000000001 ++ APIS '

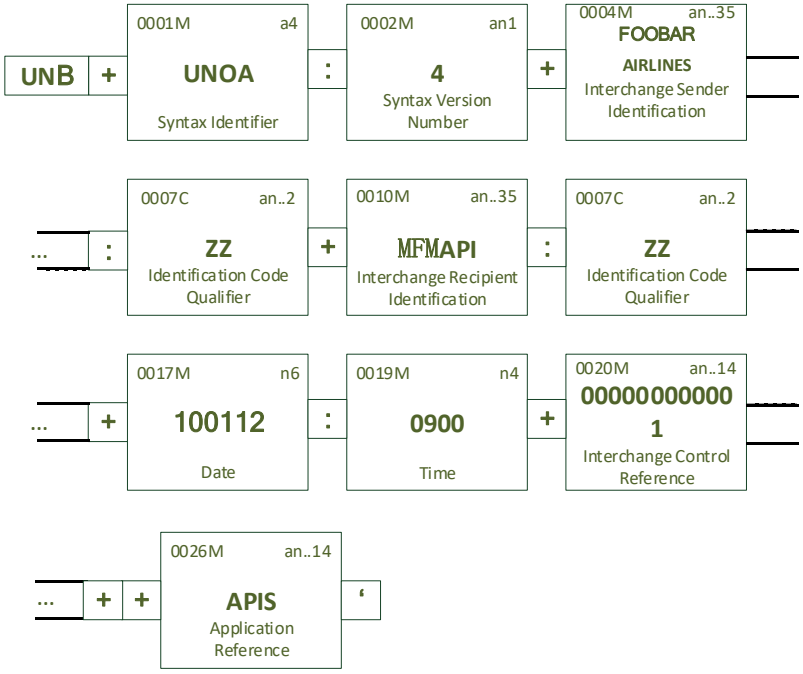


Figure 2 UNB Data Structure

Table 4 UNB Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNB |
| 0001 | Syntax Identifier | a4 | M | Constant “UNOA” |
| 0002 | Syntax Version Number | an..1 | M | Constant “4” |
| 0004 | Sender Identification | an..35 | M | Name of carrier or sender’s ID when the message was sent by other party than the carrier itself |
| 0007 | Identification Code Qualifier | an..2 | C | Any value |
| 0010 | Interchange Recipient Identification | an..8 | M | Constant “MFMAPI” |
| 0007 | Identification Code Qualifier | an..2 | C | Constant “ZZ” if required |
| 0017 | Date | n6 | M | Local date the message was sent (in format of YYMMDD). |
| 0019 | Time | n4 | M | Local time the message was sent (in format of hhmm). |
| 0020 | Interchange Control Reference | an..14 | M | Any value |
| 0026 | Application Reference | an..14 | M | Constant “APIS” |

## 5.3 UNG: Group Header

Function: Define a specific message group. Here only one group is permitted.

Usage Conditional

Example UNG+PAXLST+FOOBAR AIRLINES:ZZ+MFMAPI: ZZ +101229:0900+1+UN+D:05B'

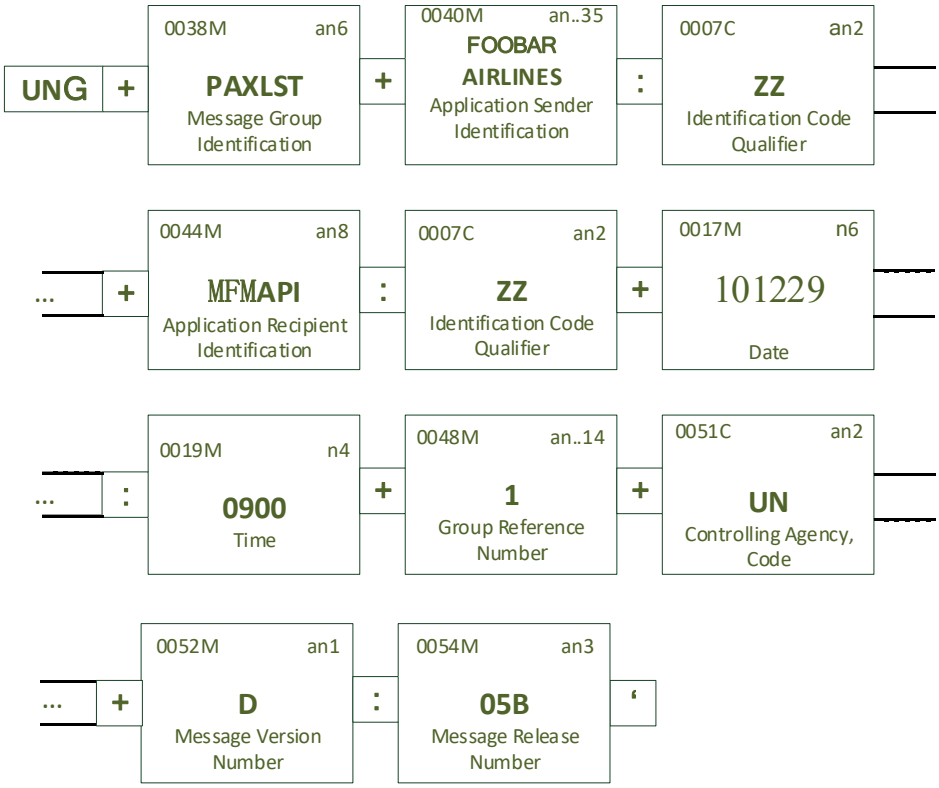


Figure 3 UNG Data Structure

Table 5 UNG Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNG |
| 0038 | Message Group Identification | an..6 | M | Constant “PAXLST” |
| 0040 | Application Sender Identification | an..35 | M | Name of carrier in English |
| 0007 | Identification Code Qualifier | an..2 | C | Any value |
| 0044 | Application Recipient Identification | an..8 | M | Constant “MFMAPI” |
| 0007 | Identification Code Qualifier | an..2 | C | Constant “ZZ” if required |
| 0017 | Date | n6 | M | Local date the message was sent (in format of YYMMDD). |
| 0019 | Time | n4 | M | Local time the message was sent (in format of hhmm). |
| 0048 | Group Reference Number | an..14 | M | Any value |
| 0051 | Controlling Agency Code | an..2 | C | Constant “UN” |
| 0052 | Message Type Version Number | an..1 | M | Version of message type.<br>Constant “D” |
| 0054 | Message Type Release Number | an..3 | M | Message type release code under version 0052.<br>Constant “05B” or later |

**Note:**

- Carriers who transmit their own flights do not need the UNG.
- Third party transmitting on behalf of a carrier should include the UNG and report the carrier’s name in the UNG segment.

## 5.4 UNH: Message Header

Function: Segment to identify the start of the message, solely identifies the message.

Usage Mandatory

Example UNH+PAX001+PAXLST:D:05B:UN:IATA+FB101108012921+01:F'

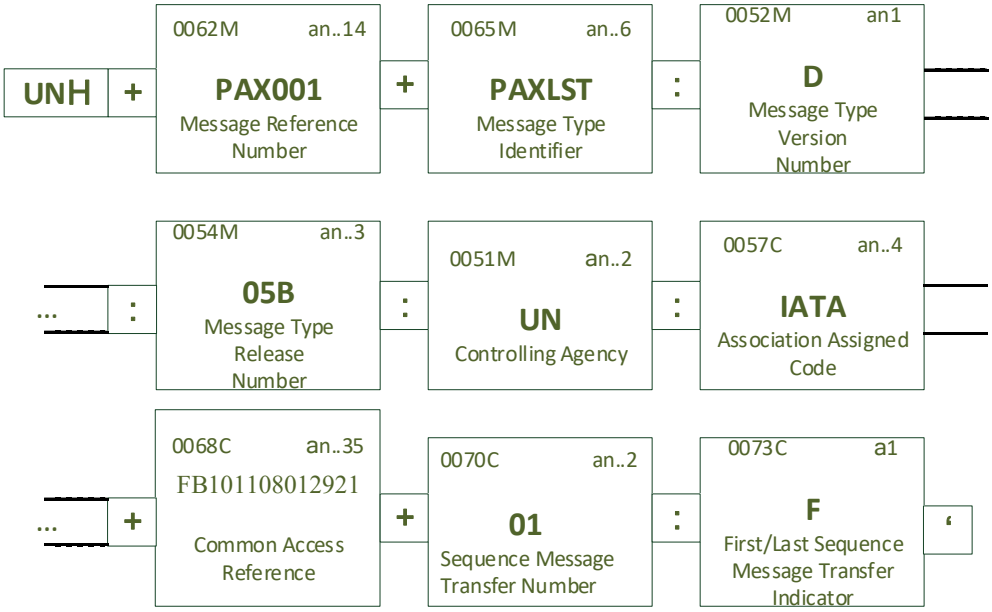


Figure 4 UNH Data Structure

Table 6 UNH Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNH |
| 0062 | Message Reference Number | an..14 | M | Any value |
| 0065 | Message Type Identifier | an..6 | M | Constant “PAXLST” |
| 0052 | Message Type Version Number | an..1 | M | Constant "D” |

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| 0054 | Message Type Release Number | an..3 | M | Constant “05B” or later |
| 0051 | Controlling Agency | an..2 | M | Constant “UN” |
| 0057 | Association Assigned Code | an..4 | C | Constant “IATA” |
| 0068 | Common Access Reference | an..35 | M | Unique value assigned to the message. Reference serving as a key to relate all subsequent transfers of data to the same business case or file. |
| 0070 | Sequence Message Transfer Number | an..2 | C | A message block sequence number is required for message divided into multiple blocks. The number starts at “01” and ascends at step of one. For message of one block, the sequence code is “01”. |
| 0073 | First/Last Sequence Message Transfer Indicator | a | C | For message sent in multiple blocks, letter “C” means “to be continued” and “F” indicates the last block. For message in one block, use letter “F”. |

**Note:**

- Data element 0068 is added into other data blocks when data parsing. When sending message in multiple data blocks, data element 0070 is required to assign different sequence value to each data block.

## 5.5 BGM: Beginning of Message

Function: Determines the message start. Indicates the type and function of the message and transmits its identifying number

Usage Mandatory

Example BGM+745'

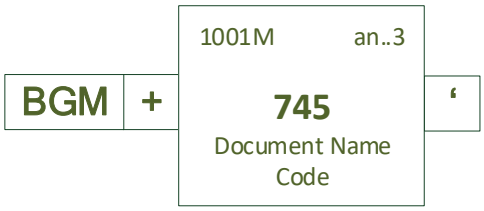


Figure 5 BGM Data Structure

Table 7 BGM Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | BGM |
| 1001 | Document Name Code | an..3 | M | Value code<br>745: passenger list<br>250: crew list |

## 5.6 RFF: Reference

Function: To specify a transaction reference number

Usage Conditional

Example RFF+TN:OZ56789034:::2’

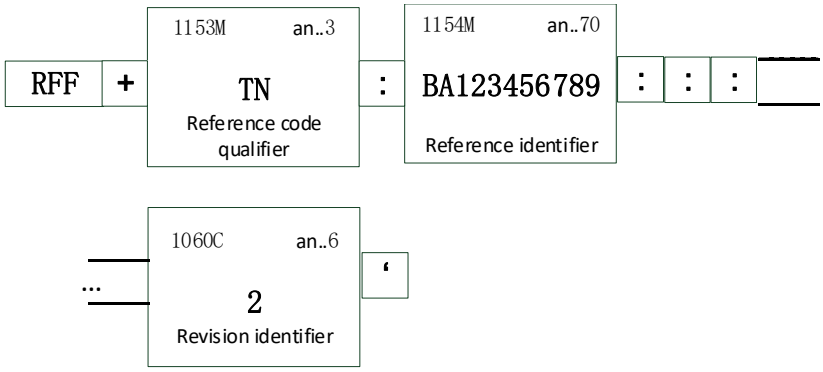


Figure 6 RFF Data Structure

Table 8 RFF Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | RFF |
| 1153 | Reference code qualifier | an..3 | M | Value code<br>TN |
| 1154 | Reference identifier | an..70 | M | Indicates transaction reference number OZ56789034 assigned by an airline system |
| 1060 | Revision identifier | an..6 | C | The Revision Identifier may optionally be used to identify this passenger data submission as the second submission for this passenger |

## 5.7 NAD: Name and Address – Reporting Party (GR. 1)

Function: Segment which identifies the company which reports the information manifest. It is recommended that the contact should be available 24/7.

Usage Conditional

Example NAD+MS+++ FOOBAR OPERATION HELP DESK'

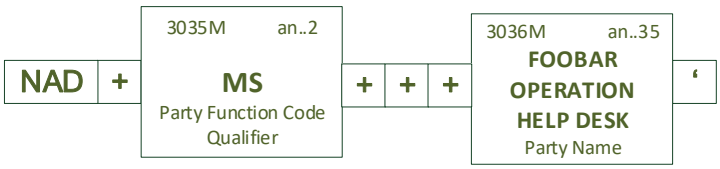


Figure 7 NAD Data Structure

Table 9 NAD Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | NAD |
| 3035 | Party Function Code Qualifier | an..2 | M | constant “MS” |
| 3036 | Party Name | an..35 | M | Name of the message sender |

## 5.8 COM: Communication Contact

Function: Segment which identifies the information for contact (phone/fax/e-mail), of the company responsible for reporting the passenger list.

Usage Conditional

Example COM+1800 692 5678:TE+555 236 1234:FX'

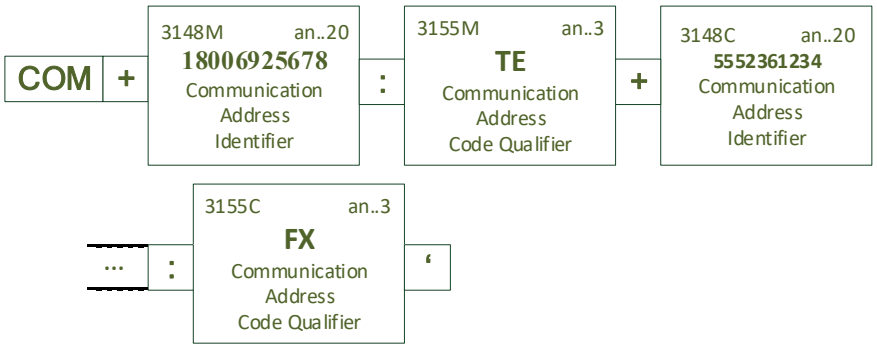


Figure 8 COM Data Structure

Table 10 COM Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | COM |
| 3148 | Communication Identifier | an..20 | M | Tel. or fax number of the one in charge of the message contents. |
| 3155 | Communication Code Qualifier | a..3 | M | Value code:<br>TE: tel. number<br>FX: fax number<br>EM for electronic mail |
| 3148 | Communication Identifier | an..20 | C | Tel. or fax number of the one in charge of the message contents. |

| | | | | |
|---|---|---|---|---|
| 3155 | Communication Code<br><br>Qualifier | a..3 | C | Value code:<br><br>TE: tel. number<br><br>FX: fax number<br><br>EM for electronic mail |

**Note:**

- Data element 3148 and 3155 can repeat up to three times to provide complete contacts data of the one in charge of message contents.
- “@” in email address must be replaced by “ AT ” (space, AT and another space).
- Do not segment telephone numbers with symbol ”-“. Use a blank space instead.

## 5.9 TDT: Details of Transport (GR. 2)

Function: Segment which specifies the flight details. IATA airline designator and flight no.

Usage Mandatory

Example TDT+20+FB1011+++FB'

TDT+20+FB1011'


Figure 9 TDT Data Structure

Table 11 TDT Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | TDT |
| 8051 | Transport Stage Qualifier | an..3 | M | Constant “20” |
| 8028 | Journey Identifier | an..9 | M | The combination code is composed of:<br>(1) Airline code, in IATA an..2 format<br>(2) Flight number, in n..4 format<br>(3) Operational suffix, in an..2 format<br>OR |

| | | | | |
|---|---|---|---|---|
| | | | | (1) Airline code, in IATA an..2 format<br>(2) Tail number, in an..8 format for non-regular flight without flight number |
| 3127 | Carrier Identification | an..3 | M | The airline's international code: IATA (an..2) |

**Note:** For airlines without IATA code, use "ZZ" instead.

## 5.10 LOC: Place/Location Identification – Flight Itinerary (GR. 3)

Function: To identify the arrival and departure airports relating to the specified flight

Usage Mandatory

Example LOC+125+PVG'

LOC+87+MFM'

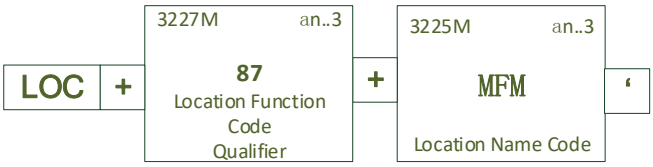


Figure 10 LOC Data Structure

Table 12 LOC Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | LOC |

| | | | | |
|---|---|---|---|---|
| 3227 | Location Function Code Qualifier | an..3 | M | **Inbound flight:**<br>**87:** first arrival place after arriving Macao<br>**125**: last departure place before arriving Macao<br>Outbound flight:<br>**87:** for first arrival place after departing Macao<br>**125:** for last departure place before departing Macao |
| 3225 | Location Name Code | an..3 | M | Airport code given by IATA. |

## 5.11 DTM: Date/Time/Period – Flight Leg (GR. 3)

Function: Segment used to specify the local times and dates for the flight origin and destination

Usage Mandatory

Example DTM+189:1012292000:201'

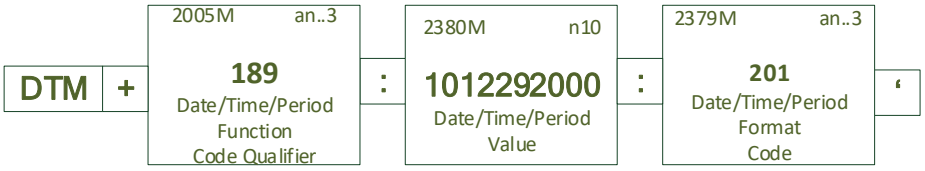


Figure 11 DTM Data Structure

Table 13 DTM Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | DTM |
| 2005 | Date/Time Period Function Code Qualifier | an..3 | M | Value code:<br>189: for STD<br>232: for STA |
| 2380 | Date/Time Period Value | n10 | M | Local time in format of YYMMDDhhmm:<br>YY - year<br>MM - month<br>DD - day<br>hh - hour<br>mm – minute |
| 2379 | Date/Time Period Format Code | an..3 | C | Constant “201” |

## 5.12 NAD: Name and Address – Traveler (GR. 4)

Function: Segment used to specify the name and address of a passenger or crew member aboard.

Usage Mandatory

Example NAD+FL+++WILLIAMS:JOHN:DONALD+235 WESTERN ROAD SUITE 203+ SLEAFORD+:::LINCS+PE22 4T5+GBR'

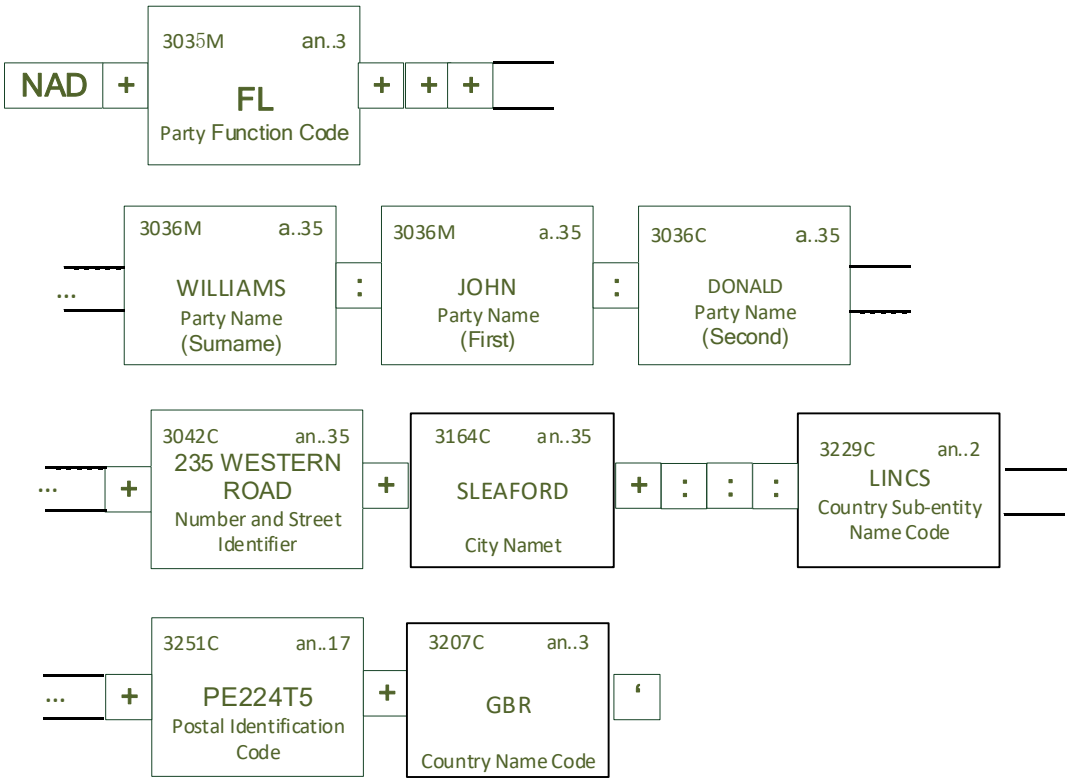


Figure 12 NAD Data Structure

Table 14 NAD Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | NAD |
| 3035 | Party Function Code Qualifier | an..3 | M | Value code:<br><br>FL: passengers<br>DDU: for in-transit passengers |

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | | | | FM: crew member<br>DDT: for in-transit crew member |
| 3036 | Party Name<br><br>(Surname) | a35 | M | Last name |
| 3036 | Party Name<br><br>(First) | a35 | M | First name or “FNU” in case where the traveler does not have a first name |
| 3036 | Party Name<br><br>(Second) | a35 | C | Middle name |
| 3042 | Number and Street Identifier | an..35 | C | Passenger address (street) |
| 3164 | City Name | an..35 | C | Passenger address (city and district) |
| 3229 | Country Sub-entity Code | an..2 | C | Passenger address (state/province) |
| 3251 | Postal Identification Code | an..17 | C | Passenger address (Zip code) |
| 3207 | Country Name Code | a..3 | C | Passenger address (country code defined by ISO 3166-1) |

**Note:**

- A transit passenger is one who arrives in Macao for passing over to other country but not to other airports in Macao.
- For passengers without first name, please fill his/her last name in mandatory data element 3036 (Party Name (Surname)) and “FNU” (First Name Unknown) in mandatory data element 3036 (Party Name (First)).
- For those who collect data from ICAO-compliant Machine Readable Travel Document (MRTD), party names should be reported in the same manner as they exist in machine readable zone (MRZ). An MRZ separator of ‘<<’ (double caret) translates into a sub-element separator. A ‘<’ (single caret) translates into a space. e.g.

  P<CANWILLIAMS<<JOHN<DONALD<<<<<<<<<<<<<<<<<<

  Party names should be:

  WILLIAMS:JOHN:DONALD
- ‘’’(single quote), ‘.’ (period), and ‘-‘ (dash) are not permitted in party name element.

- Passengers can optionally provide resident address except transit and national passengers.
- Macao destination address is optional for all passengers.

## 5.13 ATT: Attribute (GR. 4)

Function: To identify the gender of the passenger or crew member

Usage Mandatory

Example ATT+2++M'

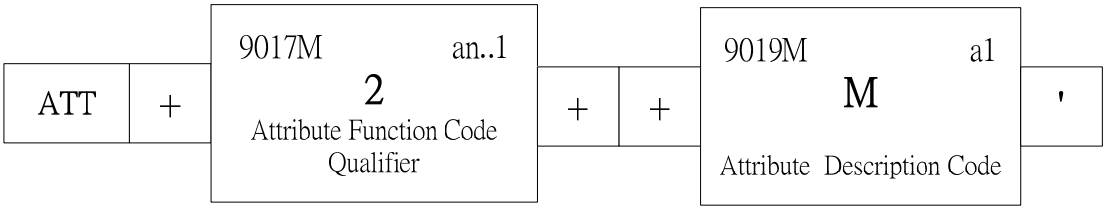


Figure 13 ATT Data Structure

Table 15 ATT Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | ATT |
| 9017 | Attribute Function Code Qualifier | an..1 | M | Constant “2” |
| 9019 | Attribute Description Code | a1 | M | Value code:<br>F: female<br>M: male<br>U: undefined<br>X: X is the official code according to document 9030 |

## 5.14 DTM: Date/Time/Period – Date of Birth (GR. 4)

Function: To specify the date of birth of a passenger or crew member

Usage Mandatory

Example DTM+329:700530'

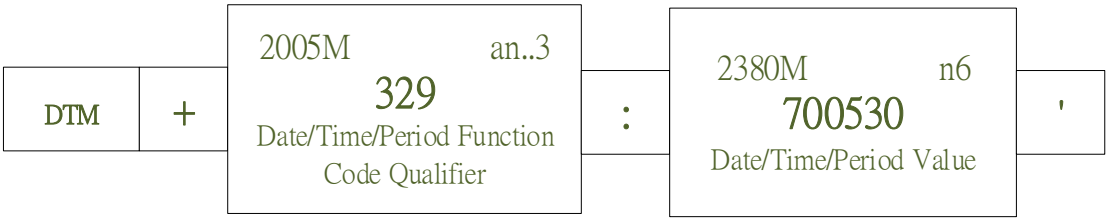


Figure 14 DTM Data Structure

Table 16 DTM Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | DTM |
| 2005 | Date/Time/Period Function Code Qualifier | an..3 | M | Constant “329” |
| 2380 | Date/Time/Period Value | n6 | M | Date of birth in format of “YYMMDD”:<br>YY - year<br>MM - month<br>DD – day |

## 5.15 MEA: Measurements (GR. 4)

Function: To specify physical measurements. This segment used to report number of Checked Bags.

Usage Mandatory if available

Example MEA+WT++KGM:28'

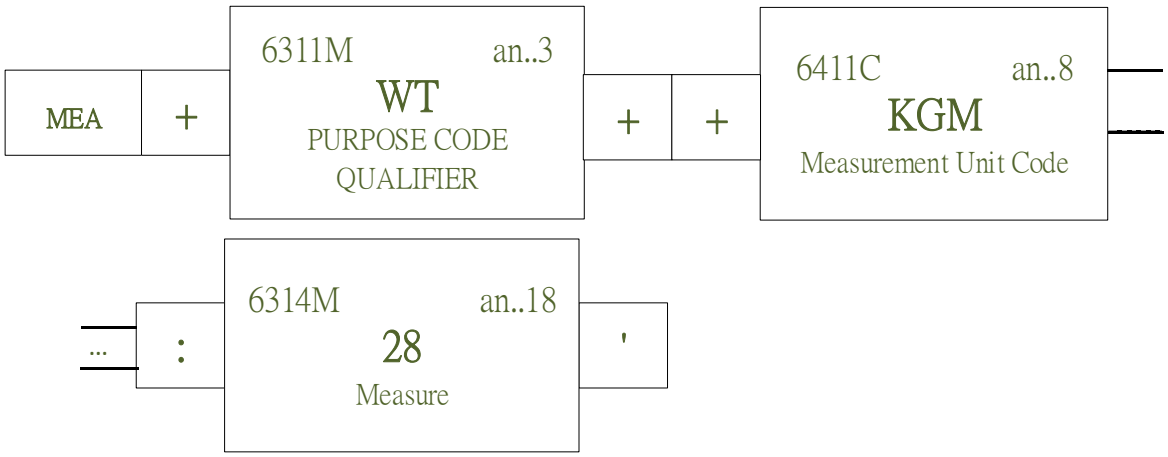


Figure 15 MEA Data Structure

Table 17 MEA Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | MEA |
| 6311 | PURPOSE CODE QUALIFIER | an..3 | M | ‘CT’ for the number of the baggage.<br>‘WT’ for the weight of the baggage. |
| 6411 | Measurement Unit Code | an..8 | C | ‘KGM’ for Kilograms.<br>‘LBR’ for Pounds |
| 6314 | Measure | an..18 | M | MEA+CT++:2' Indicates that this passenger checked two bags at pre-flight check-in. |

| | |
|---|---|
| | MEA+WT++KGM:28' Indicates that this passenger checked 28 Kgs bags at pre-flight check-in. |

## 5.16 GEI: Processing Information (GR. 4)

Function: To identify that information for this passenger has been validated.

Usage Conditional

Example GEI+4+173'

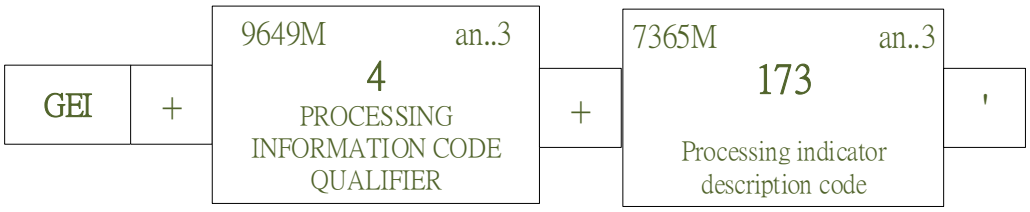


Figure 16 GEI Data Structure

Table 18 GEI Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | GEI |
| 9649 | PROCESSING INFORMATION CODE QUALIFIER | an..3 | M | Constant “4” |
| 7365 | Processing indicator description code | an..3 | M | Value code:<br>‘173’ for information verified<br>‘174’ for information not verified |

## 5.17 FTX: Free Text (GR. 4)

Function: To indicate the description and bag tag numbers of the passenger or crew effects.

Usage Conditional (Mandatory if available)

Example FTX+BAG+++AF012345:3’

Figure 17 FTX Data Structure

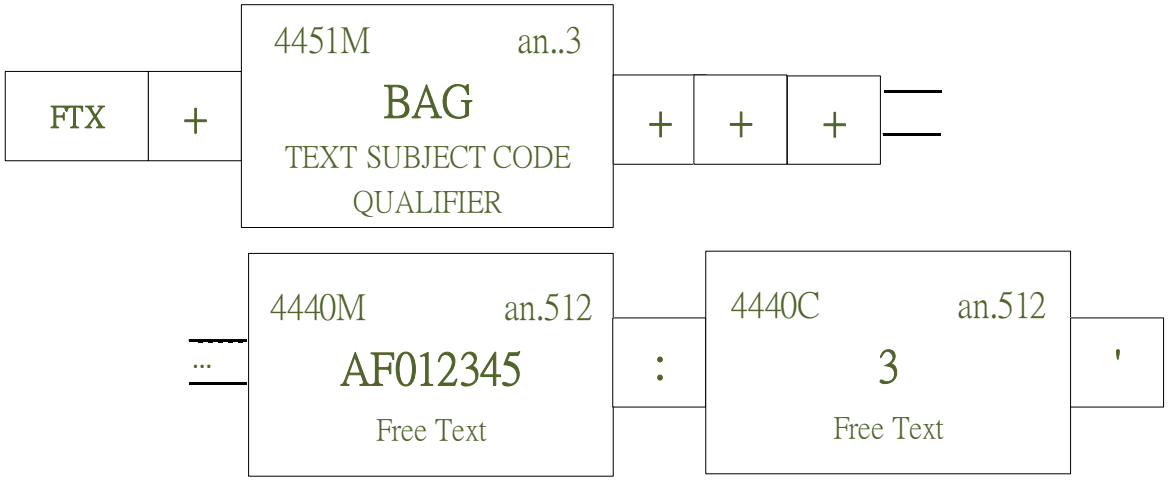


Table 19 FTX Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | FTX |
| 4451 | TEXT SUBJECT CODE QUALIFIER | an..3 | M | Value code:<br>Constant ‘BAG’ |
| 4440 | Free Text | an.512 | M | Bag Tag reference, for example ‘BA123456’ |
| 4440 | Free Text | an.512 | C | for example, FTX+BAG+++AF012345:3’, Indicates 3 bags checked beginning with a sequential reference of AF012345. |

## 5.18 LOC: Place/Location Identification – Residence/Itinerary/Birth (GR. 4)

Function: To identify the airports related to the journey, the country of residence and the place of birth of a passenger or crew member

Usage Mandatory

Example LOC+178+DTW'

Example:

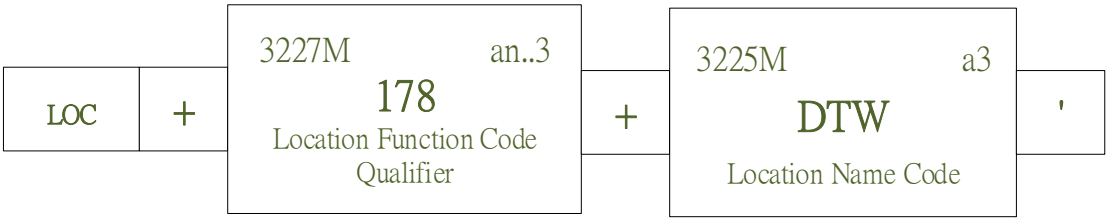


Figure 18 LOC Data Structure

Table 20 LOC Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | LOC |
| 3227 | Location Function Code Qualifier | an..3 | M | Value code:<br>22: place where traveler completes clearance procedures<br>174: country of primary residence<br>178: earliest known place in passenger's travel itinerary and may differ from the exit place of the flight.<br>179: final known place in passenger's travel itinerary and may differ from the entry place of the flight.<br>180: country of birth |

| | | | | |
|---|---|---|---|---|
| 3225 | Location name Code | a3 | M | IATA airport code or country code |

**Note:**

- Passenger's travel itinerary data must be provided even it matches the flight itinerary.
- Qualifiers 22, 174 and 180 are optional.

## 5.19 COM: Communication Contact (GR.4)

Function: Segment which identifies the information for contact (phone/fax/e-mail), of the company responsible for reporting the passenger list.

Usage Conditional

Example COM+1800 692 5678:TE+555 236 1234:FX'

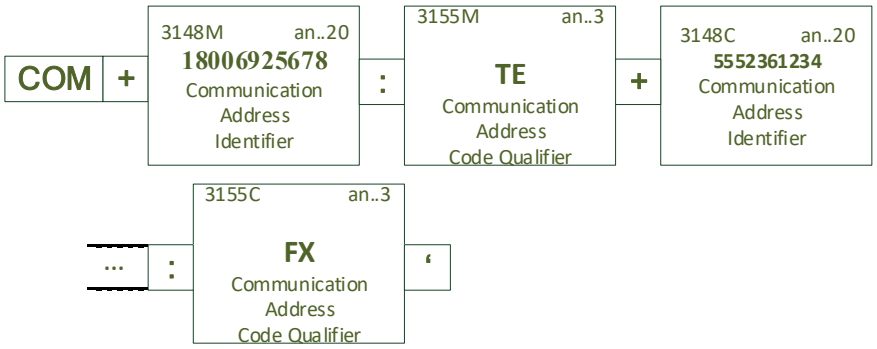


Figure 19 COM Data Structure

Table 21 COM Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | COM |
| 3148 | Communication Identifier | an..20 | M | Tel. or fax number of the one in charge of the message contents. |
| 3155 | Communication Code Qualifier | a..3 | M | Value code:<br>TE: tel. number<br>FX: fax number<br>EM for electronic mail |
| 3148 | Communication Identifier | an..20 | C | Tel. or fax number of the one in charge of the message contents. |

| | | | | |
|---|---|---|---|---|
| 3155 | Communication Code<br><br>Qualifier | a..3 | C | Value code:<br><br>TE: tel. number<br><br>FX: fax number<br><br>EM for electronic mail |

**Note:**

- Data element 3148 and 3155 can repeat up to three times to provide complete contacts data of the one in charge of message contents.
- “@” in email address must be replaced by “ AT ” (space, AT and another space).
- Do not segment telephone numbers with symbol ”-“. Use a blank space instead.

## 5.20 EMP: Employment Details (GR.4)

Function: to indicate the occupation of a passenger or the rank of crew.

Usage Conditional

Example EMP+1+CR1:110:111'

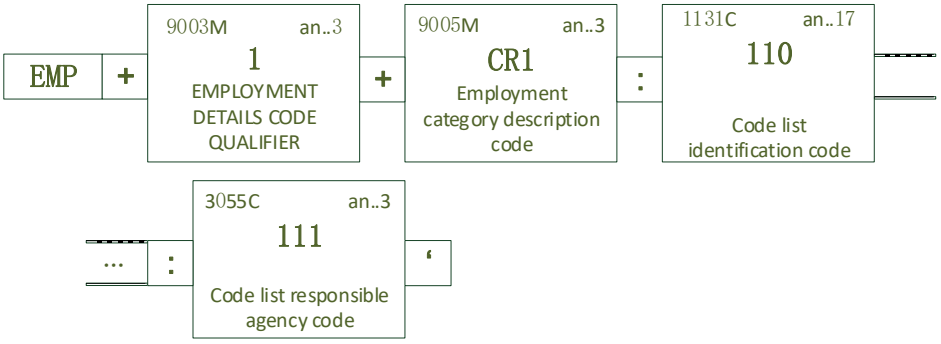


Figure 20 EMP Data Structure

Table 22 EMP Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | EMP |
| 9003 | EMPLOYMENT DETAILS CODE QUALIFIER Identifier | an..3 | M | Value code:<br><br>Constant '1' |
| 9005 | Employment category description code | an..3 | M | Value code:<br><br>'CR1' for cockpit crew or individuals inside cockpit<br><br>'CR2' for cabin crew<br><br>'CR3' for airline operation management with cockpit access<br><br>'CR4' for cargo non cockpit crew and/or non-crew individuals. |

| | | | | |
|---|---|---|---|---|
| | | | | ‘CR5’ pilots on board but not on duty |
| 1131 | Code list identification code | an..17 | C | |
| 3055 | Code list responsible agency code | an..3 | C | |

## 5.21 NAT: Nationality (GR. 4)

Function: Specify the nationality of a passenger or crew member

Usage Mandatory

Example NAT+2+SGP

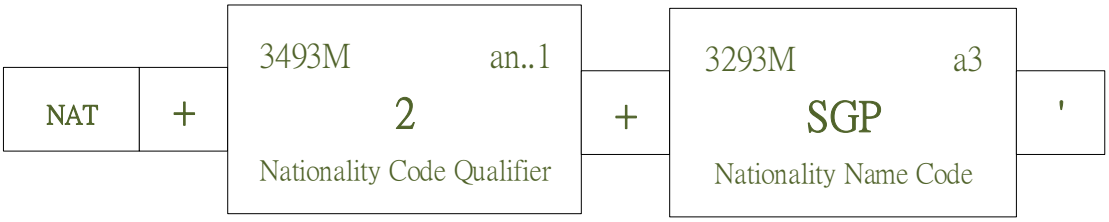


Figure 21 NAT Data Structure

Table 23 NAT Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | NAT |
| 3493 | Nationality Code Qualifier | an..1 | M | Constant “2” |
| 3293 | Nationality Name Code | a3 | M | The three characters country code given by ISO 3166-1. |

## 5.22 RFF: Reference (GR. 4)

Function: To specify the Passenger Reservation Reference number, unique Passenger Reference and Seat Identification

Usage Mandatory

Example RFF+AVF+WWHPDS (Pax Reservation Ref)

RFF+ABO:BA1321654987 (Unique Pax Ref)

RFF+SEA:22A (Seat Identification)

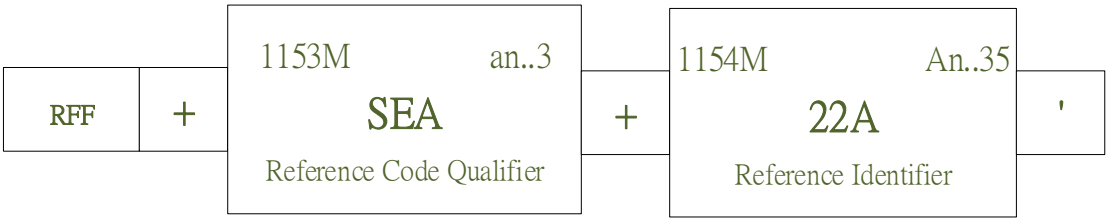


Figure 22 NAT Data Structure

Table 24 NAT Data Definition

| Data element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | RFF |
| 1153 | Reference Code Qualifier | an..3 | M | Value code:<br>AVF: passenger reservation reference number<br>ABO: unique passenger reference<br>SEA: seat identification |
| 1154 | Reference Identifier | An..35 | M | The three characters country code given by ISO 3166-1. |

- This segment does not apply to crew members.

## 5.23 DOC: Travel Document Details (GR. 5)

Function: To identify the official travel document and/or other document used for travel.

Usage Mandatory

Example DOC+P:110:ZZZ+13579110'

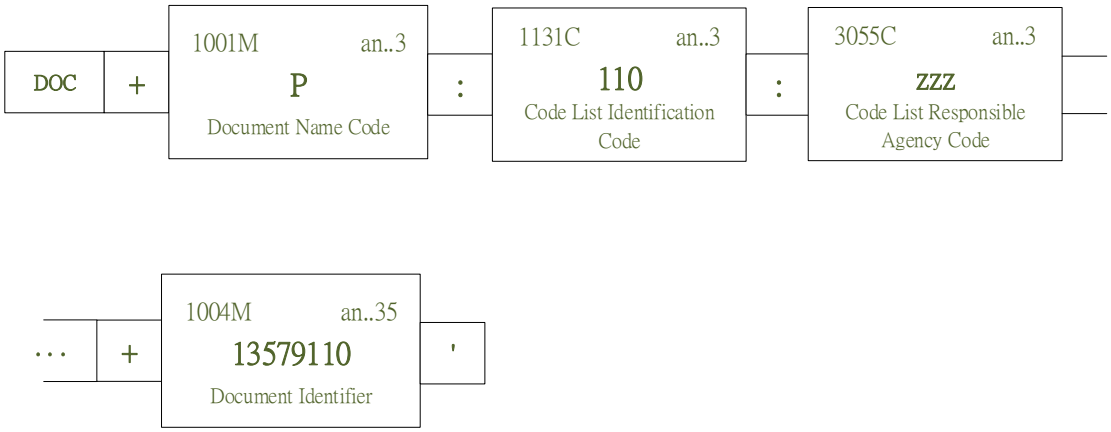


Figure 23 DOC Data Structure

Table 25 DOC Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | DOC |
| 1001 | Document Name Code | an..3 | M | ICAO 9303 Document Types:<br>P: Passport<br>PT: P.R.China Travel Permit<br>PL: P.R.China Exit and Entry Permit<br>CS: Travel Permit To and From HK and Macao<br>AK: Travel Permit To and From HK and Macao for Public Affairs<br>Q: Travel Permit To HK and Macao |

| | | | | |
|---|---|---|---|---|
| | | | | CR: Travel Permit of HK and Macao Residents To and From Mainland<br>CD: Travel Permit of Mainland Residents To and From Taiwan<br>CT: Travel Permit of Taiwan Residents To and From Mainland<br>S: Seafarer's Passport<br>F: Approved non-standard identity documents used for travel |
| 1131 | Code List Identification Code | an..3 | C | Constant "110" if used. |
| 3055 | Code List Responsable Agency Code | an..3 | C | Constant "ZZZ" if used. This value represents no meaning now. |
| 1004 | Document Identifier | an..35 | M | Travel document number without any special characters. |

## 5.24 DTM: Date/Time/Period – Travel Document (GR. 5)

Function: To specify the expiry date of the official travel document

Usage Conditional (Mandatory for official travel document)

Example DTM+36:101229'

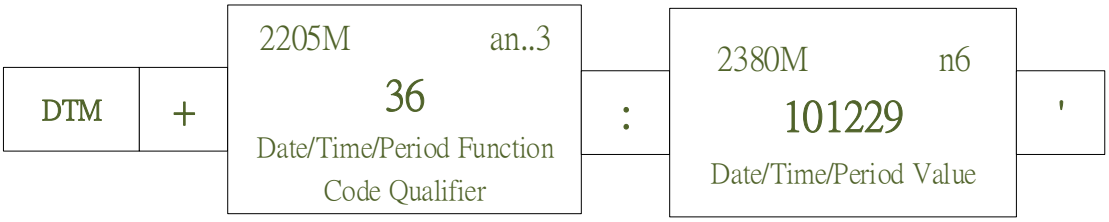


Figure 24 DTM Data Structure

Table 26 DTM Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | DTM |
| 2005 | Date/Time/Period Function Code Qualifier | an..3 | M | Value code:<br>36: expiry date of passport<br>182: for issue date |
| 2380 | Date/Time/Period Value | n6 | M | Date in format of “YYMMDD”:<br>YY - year<br>MM - month<br>DD – day |

## 5.25 LOC: Place/Location Identification – Travel Document (GR. 5)

Function: Define the issuing country of official travel document and the issuing place of other travel document

Usage Conditional (Mandatory for official travel document)

Example LOC+91+SGP'

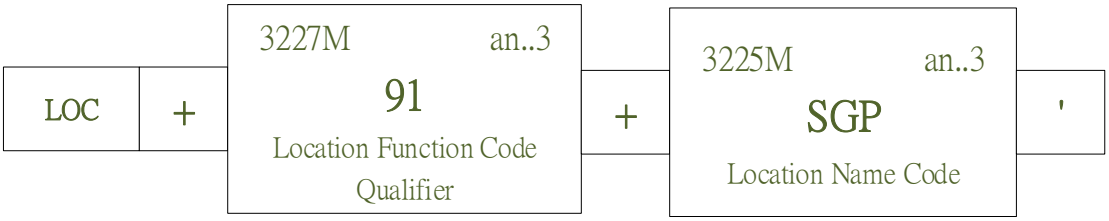


Figure 25 LOC Data Structure

Table 27 LOC Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | LOC |
| 3227 | Location Function Code Qualifier | an..3 | M | Constant “91” |
| 3225 | Location Name Code | an..3 | M | The three character country code given by ISO 3166-1. |

## 5.26 CNT: Control Total

Function: Segment used to specify the total number of passengers or crew members.

Usage Mandatory

Example CNT+42:160'

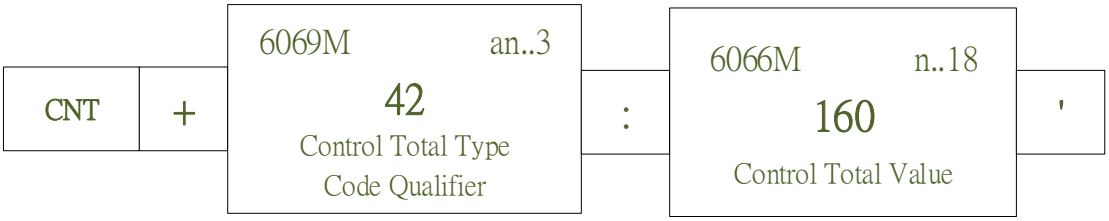


Figure 26 CNT Data Structure

Table 28 CNT Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | CNT |
| 6069 | Control Total Type Code Qualifier | an..3 | M | Valid values are<br>41: for crew<br>42: for passengers |
| 6066 | Control Total Value | n..18 | M | Total number of travelers of this type |

**Note:**

- If the passenger (or crew) message consists of several parts (multi-part API message), the number reported in CNT in each message is the total number of passengers (or crew) on the flight. It is NOT the number of passengers (or crew) being reported in each message part.

## 5.27 UNT: Message Trailer

Function: To end and check the completeness of a message by counting the segments in the message (incl. UNH and UNT) and validating that the message reference number equates to data elements 0062 in the UNH segment

Usage Mandatory

Example UNT+2578+ABC123456789'

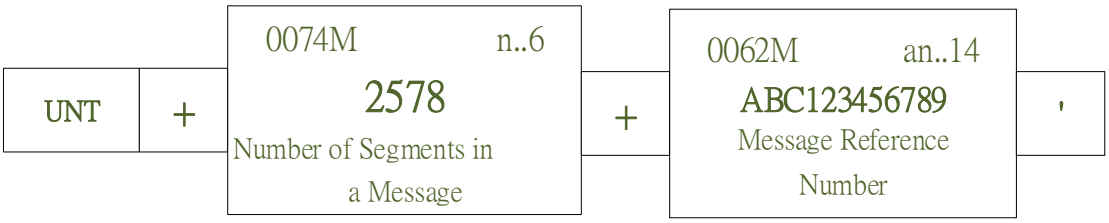


Figure 27 UNT Data Structure

Table 29 UNT Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNT |
| 0074 | Number of Segments in a Message | n..6 | M | Reply number of segments (from UNH to UNT) being used. |
| 0062 | Message Reference Number | an..14 | M | Message transaction number (must match the message number contained in data element 0062 of UNH). |

## 5.28 UNE: Group Trailer

Function: To end and check the completeness of a Functional Group

Usage Conditional

Example UNE+1+1'

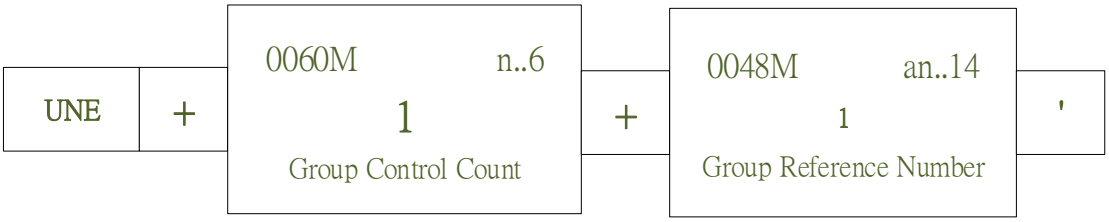


Figure 28 UNE Data Structure

Table 30 UNE Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNE |
| 0060 | Number of messages | n6 | M | Number of messages in the group. Usually have the value 1; It will be 2 if both crew and passenger manifest are included. |
| 0048 | Group Reference Number | an..14 | M | Must match with data element 0048 of UNG. |

**Note:** If UNG tag is used then the UNE tag is mandatory.

## 5.29 UNZ: Interchange Trailer

Function: To terminate an interchange and provide an integrity check.

Usage Mandatory

Example UNZ+1+000000000001'

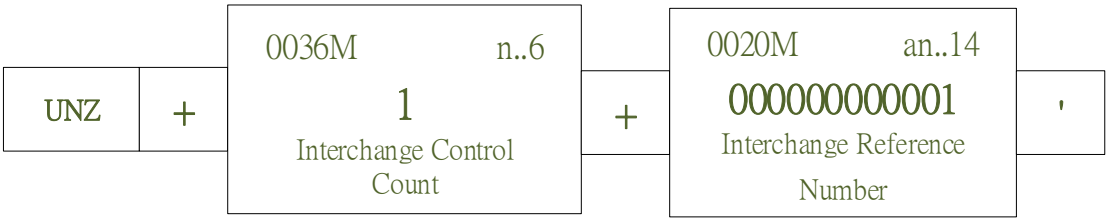


Figure 29 UNZ Data Structure

Table 31 UNZ Data Definition

| Element | Name | Format | M/C | Remarks |
|---|---|---|---|---|
| | Segment Label | | | UNZ |
| 0036 | Interchange Control Count | n6 | M | Code Value:<br>Constant “1 “ |
| 0020 | Interchange Reference Number | an..14 | M | Must match with data element 0020 of UNB. |

# 6 Appendix A: Examples

The examples below are presented on a segment-by-segment basis for readability.

## 6.1 Single-block passenger message

```
UNA:+.? '
UNB+UNOA:4+AIR CANADA:ZZ+MFMAPI:ZZ+161025:1615+000000001++APIS'
UNG+PAXLST+AIRCANADA:AC+MFMAPI:ZZ+161025:1615+00001+UN+D:05B'
UNH+ABC123456789+PAXLST:D:05B:UN:IATA+AC888141026113099+01:F'
BGM+745'
RFF+TN:02882403GOI0610:::1
NAD+MS+++AIRCANADA OPERATIONAL HELP DESK'
COM+555 123 456789:TE+555 123 456780:FX+HELPDESK AT AIRCANADA.COM:EM'
TDT+20+AC888+++AC'
LOC+125+YVR'
DTM+189:1610251410:201'
LOC+87+MFM'
DTM+232:1610260750:201'
NAD+FL+++HONG:SUZI ALICE'
ATT+2++F'
DTM+329:770412'
MEA+CT++:2'
MEA+WT++KGM:38'
GEI+4+173'
FTX+BAG+++086531871:02’
LOC+178+YYZ'
LOC+179+MFM '
COM+SUZI2025 AT OUTLOOK.COM:EM+8614902403687:TE'
NAT+2+CAN'
RFF+AVF:W4CTGT'
RFF+ABO:BA1388654986'
RFF+SEA:27A'
DOC+P:110:111+P3212311W'
DTM+36:161008'
LOC+91+CAN'
NAD+FL+++HOFFMAN:ELSE DAISY'
ATT+2++F'
DTM+329:620318'
MEA+CT++:2'
MEA+WT++KGM:40'
GEI+4+173'
FTX+BAG+++086531881:02’
LOC+178+YYZ'
LOC+179+MFM '
COM+HOFFMAN AT OUTLOOK.COM:EM+6149078797:TE'
NAT+2+FRA'
RFF+AVF:ADHPRT'
RFF+ABO:BA1321654988'
RFF+SEA:6C'
DOC+P:110:111+095213437'
DTM+36:170911'
LOC+91+FRA'
NAD+FL+++HOFFMAN:ROGER ALAN'
ATT+2++M'
DTM+329:720612'
MEA+CT++:2'
MEA+WT++KGM:37'
GEI+4+173'
FTX+BAG+++086531637:02’
LOC+178+YVR'
```

```
LOC+179+MFM '
COM+ROGER AT OUTLOOK.COM:EM+6189073636:TE'
NAT+2+ITA'
RFF+AVF:WYUP8S'
RFF+ABO:BA1321654987'
RFF+SEA:6B'
DOC+P:110:111+604405713'
DTM+36:160111'
LOC+91+ITA'
CNT+42:3'
UNT+38+ABC123456789'
UNE+1+00001'
UNZ+1+000000001'
```

## 6.2 Multi-part passenger messages

### Part 1 of 3

```
UNA:+.? '
UNB+UNOA:4+AIR CANADA:ZZ+MFMAPI:ZZ+161025:1615+000000001++APIS'
UNG+PAXLST+AIRCANADA:AC+MFMAPI:ZZ+161025:1615+00001+UN+D:05B’
UNH+ABC123456789+PAXLST:D:05B:UN:IATA+AC999141026113099+01:C'
BGM+745'
RFF+TN:02882403GOI0622
NAD+MS+++AIRCANADA OPERATIONAL HELP DESK'
COM+555 123 456789:TE+555 123 456780:FX+HELPDESK AT AIRCANADA.COM:EM'
TDT+20+AC999+++AC'
LOC+125+YVR
DTM+189:1610251410:201'
LOC+87+MFM'
DTM+232:1610260750:201'
NAD+FL+++HONG:SUE ALICE'
ATT+2++F'
DTM+329:770412'
MEA+CT++:2'
MEA+WT++KGM:33'
GEI+4+173'
FTX+BAG+++086531641:02’
LOC+178+YVR'
LOC+179+MFM '
COM+SU2009 AT OUTLOOK.COM:EM+615907556:TE'
NAT+2+CAN'
RFF+AVF:W4CT6S'
RFF+ABO:BA1388654986'
RFF+SEA:27A'
DOC+P:110:111+P3212311W'
DTM+36:161008'
LOC+91+CAN'
CNT+42:3'
UNT+20+ABC123456789'
UNE+1+00001'
UNZ+1+000000001'
```

### Part 2 of 3

```
UNA:+.? '
UNB+UNOA:4+AIR CANADA:ZZ+MFMAPI:ZZ+161025:1615+000000001++APIS'
UNG+PAXLST+AIRCANADA:AC+MFMAPI:ZZ+161025:1615+00001+UN+D:05B'
UNH+ABC123456789+PAXLST:D:05B:UN:IATA+AC999141026113099+02'
BGM+745'
RFF+TN:02882403GOI0622
NAD+MS+++AIRCANADA OPERATIONAL HELP DESK'
```

```
COM+555 123 456789:TE+555 123 456780:FX+HELPDESK AT AIRCANADA.COM:EM'
TDT+20+AC999+++AC'
LOC+125+YVR'
DTM+189:1610251410:201'
LOC+87+MFM'
DTM+232:1610260750:201'
NAD+FL+++HOFFMAN:ELSE MAISY'
ATT+2++F'
DTM+329:620318'
MEA+CT++:2'
MEA+WT++KGM:39'
GEI+4+173'
FTX+BAG+++086531621:02’
LOC+178+YVR'
LOC+179+MFM '
COM+ELSE7788 AT OUTLOOK.COM:EM+617907726:TE'
NAT+2+FRA'
RFF+AVF:WWHKKS'
RFF+ABO:BA1321654988'
RFF+SEA:6C'
DOC+P:110:111+095213437'
DTM+36:170911'
LOC+91+FRA'
CNT+42:3'
UNT+20+ABC123456789'
UNE+1+00001'
UNZ+1+000000001'
```

## Part 3 of 3

```
UNA:+.? '
UNB+UNOA:4+AIR CANADA:ZZ+MFMAPI:ZZ+161025:1615+000000001++APIS'
UNG+PAXLST+AIRCANADA:AC+MFMAPI:ZZ+161025:1615+00001+UN+D:05B’
UNH+ABC123456789+PAXLST:D:05B:UN:IATA+AC999141026113099+03:F'
BGM+745'
RFF+TN:02882403GOI0622
NAD+MS+++AIRCANADA OPERATIONAL HELP DESK'
COM+555 123 456789:TE+555 123 456780:FX+HELPDESK AT AIRCANADA.COM:EM'
TDT+20+AC999+++AC'
LOC+125+GOI'
DTM+189:1610251410:201'
LOC+87+HEL'
DTM+232:1610260750:201'
NAD+FL+++HOFFMAN:ROBERT ALAN'
ATT+2++M'
DTM+329:720612'
MEA+CT++:2'
MEA+WT++KGM:35'
GEI+4+173'
FTX+BAG+++086531611:02’
LOC+178+YVR'
LOC+179+MFM '
COM+ROBERT909 AT OUTLOOK.COM:EM+625907777:TE'
NAT+2+ITA'
RFF+AVF:FKLPDS'
RFF+ABO:BA1321654987'
RFF+SEA:6B'
DOC+P:110:111+604405713'
DTM+36:160111'
LOC+91+ITA'
CNT+42:3'
UNT+20+ABC123456789'
```

```
UNE+1+00001'
UNZ+1+000000001'
```

## 6.3 Single-block crew message

```
UNA:+.? '
UNB+UNOA:4+AIR CANADA:ZZ+MFMAPI:ZZ+161125:1615+000000001++APIS'
UNG+PAXLST+AIRCANADA:AC+MFMAPI:ZZ+161125:1615+00001+UN+D:05B'
UNH+ABC123456789+PAXLST:D:05B:UN:IATA+AC888141926113099+01:F'
BGM+250'
RFF+TN:02882403GOI0678
NAD+MS+++AIRCANADA CREWCONTROL'
COM+555 123 456789:TE+555 123 456780:FX+HELPDESK AT AIRCANADA.COM:EM'
TDT+20+AC123+++AC'
LOC+125+YVR'
DTM+189:1611251410:201'
LOC+87+MFM'
DTM+232:1611260750:201'
NAD+FM+++SMITH:JOHN MARTIN'
ATT+2++M'
DTM+329:701118'
LOC+178+YVR'
LOC+179+MFM '
NAT+2+CAN'
DOC+P:110:111+P123456789'
DTM+36:181109'
LOC+91+CAN'
NAD+FM+++JONES:LEE PATRICK'
ATT+2++M'
DTM+329:690710'
LOC+178+YVR'
LOC+179+MFM '
NAT+2+CAN'
DOC+P:110:111+P34567890'
DTM+36:190305'
LOC+91+CAN'
NAD+FM+++KIM:HEE JIN'
ATT+2++F'
DTM+329:851222'
LOC+178+YVR'
LOC+179+MFM '
NAT+2+CAN'
DOC+P:110:111+P87654322'
DTM+36:180721'
LOC+91+CAN'
CNT+41:3'
UNT+20+ABC123456789'
UNE+1+00001'
UNZ+1+000000001'
```