

## PART 1 - GENERAL (GEN)

### GEN 0.

#### GEN 0.1 PREFACE

##### 1. Name of the Publishing Authority

The AIP is published by authority of the Namibia Civil Aviation Authority.

##### 2. Applicable ICAO documents

The AIP is prepared in accordance with the Standards and Recommended Practices (SARPs) of Annex 15 to the Convention on International Civil Aviation, *Aeronautical Information Services Manual* (ICAO Doc 8126) and the *Procedures for Air Navigation Services Aeronautical Information Management* (ICAO Doc 10066). Charts contained in the AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the *Aeronautical Chart Manual* (ICAO Doc 8697). Differences from ICAO Standards, Recommended Practices and Procedures are given in sub-section GEN 1.7.

##### 3. The AIP structure and established regular amendment interval

###### 3.1 The AIP Structure

3.1.1 The AIP forms part of the Integrated Aeronautical Information Package, details of which are given in sub-section GEN 3.1. The principal AIP structure is shown in graphic form on page GEN 0.1-3.

3.1.2 The AIP is made up of three Parts, General (GEN), En-route (ENR) and Aerodromes (AD), each divided into sections and sub-sections as applicable, containing various types of information subjects.

###### 3.1.3 Part I - General (GEN)

Part 1 consists of five sections containing information as briefly described hereafter.

- a) *GEN 0* - Preface; Record of AIP Amendments, Record of AIP Supplements; Checklists of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 1.

- b) *GEN 1. National regulations and requirements* - Designated authorities; Entry, transit and departure of aircraft; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; Aircraft instruments, equipment and flight documents; Summary of national regulations and international agreements/conventions; and Differences from ICAO Standards, Recommended Practices and Procedures.

- c) *GEN 2. Tables and codes* - Measuring system, aircraft markings, holidays; Abbreviations used in AIS publications; Chart symbols; Location indicators; List of radio navigation aids; Conversion tables; and Sunrise/sunset tables.

- d) *GEN 3. Services* - Aeronautical information services; Aeronautical charts; Air traffic services; Communication services; Meteorological services; and Search and rescue.

- e) *GEN 4. Charges for aerodromes/heliports and air navigation services* - Aerodrome/heliport charges; and Air navigation services charges.

###### 3.1.4 Part 2 - En-route (ENR)

Part 2 consists of seven sections containing information as briefly described hereafter.

- a) *ENR 0* - Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; and the Table of Contents to Part 2.
- b) *ENR 1. General rules and procedures* - General rules; Visual flight rules; Instrument flight rules; ATS airspace classification; Holding, approach and departure procedures; Radar services and procedures; Altimeter setting procedures; Regional supplementary procedures;

Air traffic flow management; Flight planning; Addressing of flight plan messages; Interception of civil aircraft; Unlawful interference; and Air traffic incidents,

- c) *ENR 2. Air traffic services airspace* - Detailed description of Flight information regions (FIR); Upper flight information regions (UIR); Terminal control areas (TMA); and Other regulated airspace.
- d) *ENR 3. ATS routes* - Detailed description of Lower ATS routes; Upper ATS routes; Area navigation routes; Helicopter routes; other routes; and En-route holding.

Note: Other types of routes which are specified in connection with procedures for traffic to and from aerodromes/heliports are described in the relevant sections and sub-sections of Part 3 - Aerodromes.

- e) *ENR 4. Radio navigation aids/systems* - Radio navigation aids - en-route; Special navigation systems; Name-code designators for significant points; and Aeronautical ground lights - en-route.
- f) *ENR 5. Navigation warnings* - Prohibited, restricted and danger areas; Military exercise and training areas; other activities of a dangerous nature; Air navigation obstacles - en-route; Aerial sporting and recreational activities; and Bird migration and areas with sensitive fauna.
- g) *ENR 6. En-route charts* - En-route Chart - ICAO and index charts.

### 3.2 **Regular amendment interval**

3.2.1 Permanent changes to the AIP shall be published as AIP Amendments.

3.2.2 Amendments to AIP shall be issued every 4 months at the following pre-determined months:

- a) 15 March
- b) 15 July
- c) 15 November

3.2.3 When an AIP AMDT will not be published on the established publication date, a NIL notification shall be originated and distribution by

means of the monthly printed Plain Language Summary of NOTAM in force (NIF).

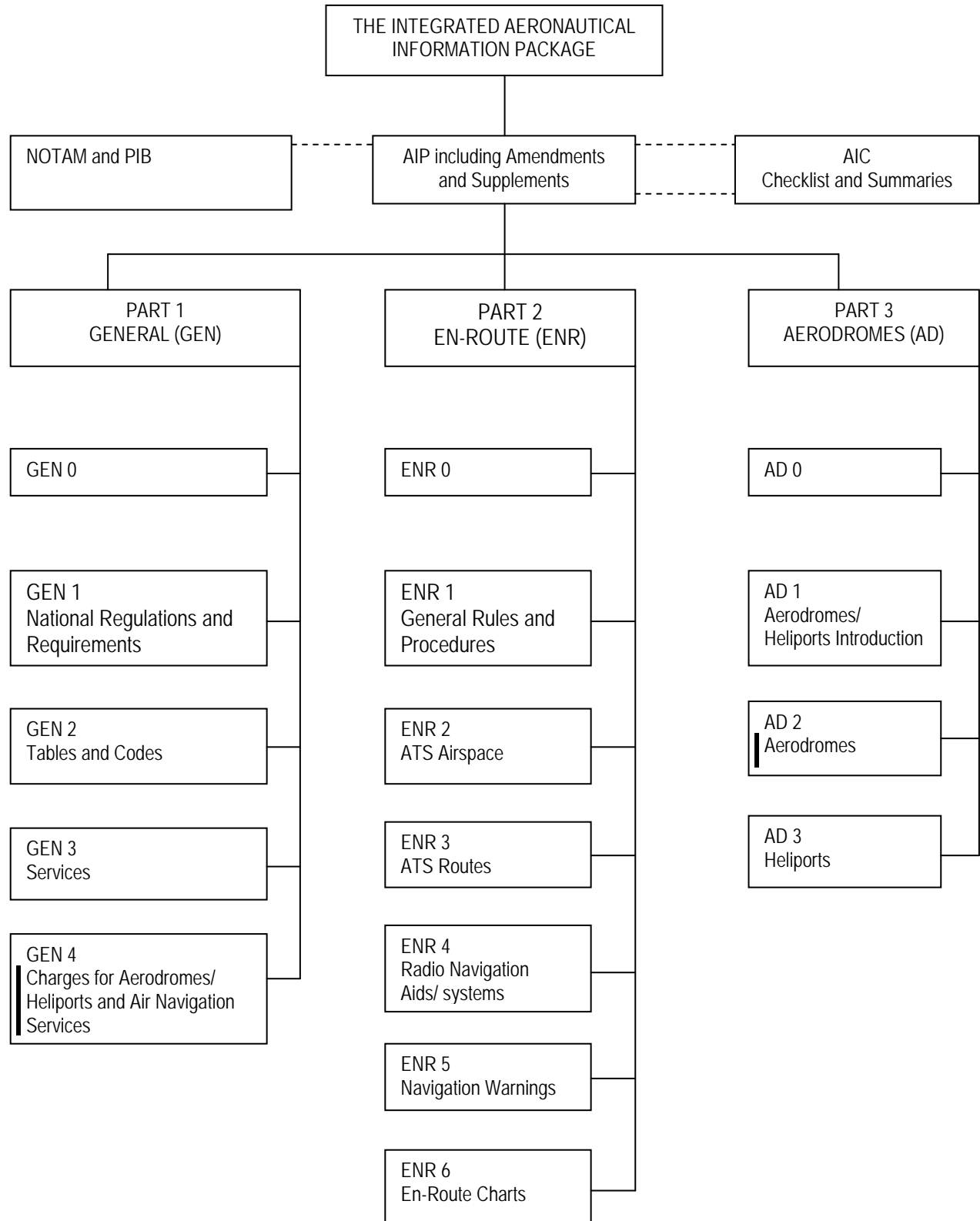
#### 4. **Service to contact in case of detected AIP errors or omissions**

In the compilation of the AIP, care has been taken to ensure that the information contained therein is accurate and complete. Any errors and omissions which may nevertheless be detected, as well as any correspondence concerning the Aeronautical Information Product, should be referred to:

Namibia Civil Aviation Authority  
Aeronautical Information Service Centre  
Private Bag 12003  
Ausspannplatz  
Windhoek

TEL: +264 61 702082/2203

Email: aip@ncaa.na



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## GEN 1. NATIONAL REGULATIONS AND REQUIREMENTS

### GEN 1.1 DESIGNATED AUTHORITIES

The addresses of the designated authorities concerned with the facilitation of international air navigation are as follows:

#### 1. Civil Aviation

Executive Director: Namibia Civil Aviation  
Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek  
Telephone: +264 83 2352100  
AFS: FYHQYAYX  
E-mail: director@ncaa.na

#### 2. Meteorology

Deputy Director  
Private Bag 13224  
Windhoek  
Tel: +264 61 2877001  
Telefax: +264 61 2877009  
AFS: Nil  
E-mail: fuirab@meteona.com

#### 3. Customs

Director: Customs and Excise  
Private Bag 13185  
Windhoek  
Tel: +264 61 2099111  
Telefax: +264 61 239278  
AFS: Nil

#### 4. Immigration

Director Alien Control  
Private Bag 13200  
Windhoek  
Tel: +264 61 2922111  
Telefax: +264 61 223817  
AFS: Nil

#### 5. Health

Director of Health and Social Services  
Private Bag 13198  
Windhoek  
Tel: +264 61 2032303  
Telefax: +264 61 2032334  
AFS: Nil

#### 6. Namibia Airports Company

P. O. Box 23061, Windhoek  
Tel: +264 61 2955000  
Tel/fax +264 61 2955022

#### 7. En-Route and Aerodrome charges

Executive Director: Namibia Civil Aviation  
Authority  
Namibia Civil Aviation Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek  
Tel: +264 61 702060  
Telefax: +264 61 702066  
AFS: FYHQYAYX

#### 8. Agricultural quarantine

Director: Veterinary Services  
Private Bag 12022  
Windhoek  
Tel: +264 61 2029111  
Telefax: +264 61 221962

## 9. Aircraft accidents investigation

Director: Aircraft Accident & Incident  
Investigation

Private Bag 12003  
Ausspannplatz  
Windhoek

Tel: +264 61 2088111  
Telefax: +264 61 2088495  
AFS: Nil

## GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

### 1. Regulations concerning entry, transit and departure of aircraft on international flights

All flights into, from or over Namibia shall be carried out in accordance with the Namibian Civil Aviation Regulations.

### 2. Scheduled flights

#### 2.1 *Flights to and from Namibia*

2.1.1 Except with prior approval of the Namibia Civil Aviation Authority, the pilot in command of any flight, crossing the border of Namibia for the purpose of

2.1.1.1 Landing in Namibia, shall except in an emergency:

- a) Make its first landing at a designated aerodrome.
- b) Report to the nearest police officer, immigration officer or customs officer.
- c) Not allow any goods to be unloaded from the ACFT or any PAX leave the AD without the permission of the said officer.
- d) Not take off from such aerodrome without the written permission of the said officer.

2.1.2 In the event of an emergency landing at a place other than a designated aerodrome, the pilot in command shall comply with the requirements of subparagraphs b, c, and d of paragraph 2.1.1.1.

2.1.2.1 Intending to leave Namibia shall:

- a) Depart only from a designated aerodrome.
- b) Before such departure, report to the nearest police officer, immigration officer or customs officer with all the information in relation to the journey, ACFT, passengers, crew and cargo.
- c) Not depart from such AD without the written permission from such police, immigration or customs officer.

d) Not, after such departure and before crossing the border, land at any other place in Namibia.

2.1.3 Provided that if forced by any emergency to land before crossing the border, the requirements of sub paragraph 2.1.2.1b., c. and d. shall be complied with.

2.1.4 The under-mentioned aerodromes have been designated port of entry/exit aerodromes:

- a) Hosea Kutako INTL Airport, Windhoek.
- b) Eros.
- c) Keetmanshoop.
- d) Ondangwa.
- e) Oranjemund.
- f) Katima Mulilo.
- g) Rundu.
- h) Gobabis.
- i) Walvis Bay.
- j) Luderitz.

#### 2.2 *Documentary requirements for clearance of aircraft*

It is a requirement that the under-mentioned documents be submitted by operators for clearance on entry and departure of their aircraft to and from Namibia. All documents listed below must follow the ICAO standard format as set forth in the relevant Appendices to Annex 9 and are acceptable when furnished in English and completed in legible handwriting.

**Aircraft documents required (arrival/departures)**

Required by	General declaration	Passenger Manifest	Cargo Manifest
Customs	Two	One	One
Passport Control	Two	Two	Nil
Health	One	One	One

**Note:**

1. Incoming passengers cannot be cleared by Passport Control unless a passenger manifest is presented timeously.
2. The following additional information on the general declaration and cargo manifest is required:

**General Declaration**

- a) Particulars in respect of "stores" and "cargo" are required.
- b) Crew members' names.

**3. Non-scheduled flights**

Certain limitations and conditions shall apply to any aircraft of another Contracting State which engages in the carriage to or from Namibia of passengers, cargo or mail for remuneration or hire on other than scheduled international air services unless such aircraft is operated under an appropriate license granted in terms of section nine of the Air Services Act, 1949 (Act No 51 of 1949).

**4. Private flights**

**4.1 Notification of arrival**

The information contained in the flight plan is accepted as adequate notification of the arrival of incoming aircraft.

**4.2 Overflights and landing clearance**

4.2.1 Pilots and Operators of all foreign registered aircraft, intending to fly through Namibian airspace or within Namibia Airspace must submit a request to obtain an over-flight or landing clearance. Such requests must be submitted not less than 24 hours prior to departure.

4.2.2 Requests can be faxed to: Namibia Civil Aviation Authority, fax number +264 61 702088 during office hours only.

4.2.3 In emergencies, only the following fax number is available after hours and weekends:  
+264 62 702499.

**4.3 Documentary requirements for clearance of aircraft**

Same requirements as for scheduled flights.

**5. Public health measures applied to aircraft**

5.1 With the following exemption, no public health measures are required to be carried out in respect of aircraft entering Namibia.

5.2 Aircraft arriving from endemic yellow fever areas may land at international airports in Namibia provided that the aircraft has been disinfected approximately thirty minutes before arrival at the airport. This action must be properly recorded in the Health Section of the General Declaration. The insecticide to be used must conform to the specifications of the World Health Organisation.

## GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

### 1. Customs requirements

1.1 Baggage or articles belonging to disembarking passengers and crew are immediately released except for those selected for inspection by the customs authorities. Such baggage will be cleared on the basis of a declaration.

1.2 No customs formalities are normally required on departure.

### 2. Immigration requirements

2.1 Visas are normally not required for passengers arriving or departing on the same through flight or in transit for another flight at the same airport. Transit passengers wishing to leave the transit areas must obtain visas.

2.2 To gain entry into the Republic of Namibia, a visitor or a person seeking admission for a temporary stay, must comply with the requirements of the Immigration Control Act, 1993 (Act No 7 of 1993) as amended, i.e. he/she must inter alia be in possession of a valid passport, duly visaed for entry into the Republic of Namibia if not exempt from the visa requirements, and must satisfy the immigration officer at the port of entry that he/she is in possession of a fully paid-up return or onward airline ticket and that he/she has sufficient means to sustain him-/herself for a reasonable period after his/her arrival, that he/she has never been refused entry or ordered to leave the Republic of Namibia and has never been convicted of any crime in any country.

2.3 A person who cannot comply with the aforementioned requirements, may be refused entry. If admitted, he/she may be called upon to make a cash deposit equivalent of a airline ticket, which will be refunded on his/her departure. To facilitate visitors or persons seeking admission for a temporary stay, are advised to be in possession of a return airline ticket.

2.4 The crew members licence or certificate is accepted in lieu of passport or visa for temporary admission into the Republic of Namibia in respect of a flight crew member on a scheduled service who retains his/her licence in his/her possession when embarking or disembarking, who remains at the

airport where the aircraft has stopped or within the confines of the cities adjacent thereto, and who departs on the same aircraft or on the next regularly scheduled flight out of the Republic of Namibia. A crew member who enters the Republic of Namibia as a passenger in order to join an aircraft must be in possession of a passport, duly visaed where required.

2.5 Passengers arriving or departing must complete an arrival/departure form, which must be handed to the immigration officer.

2.6 Visitor entry permits are required in respect of all foreign visitors. The permits specify the purpose of the visit and the length of stay, which is normally limited to three months. The permits are issued by the immigration officer at the port of entry. Applications for the extension of the validity thereof may be made to the Ministry of Home Affairs, Private Bag 13200, Windhoek. An application for extension of the permit must be submitted at least one month before the expiry date. The conditions stipulated in the permit must be strictly adhered to and the holder may not without the authority of the Permanent Secretary in the Ministry of Home Affairs accept or change employment, engage in any business or profession or remain in the country later than the expiry date on the permit, other than for the purpose for which he/she was admitted.

2.7 Without special permission from the Permanent Secretary in the Ministry of Home Affairs aliens are not allowed to accept employment. A person coming to the Republic of Namibia on contract or for employment must produce a work permit to the immigration officer.

2.8 Holders of foreign passports who are residents of Namibia should obtain re-entry visas before their departure from Namibia. The departure of persons from Namibia is regulated by the Departure from Namibia Regulation Amendment Act, No. 4 of 1993.

### 3. Public health requirements

3.1 Disembarking passengers are not required to present vaccination certificates except when coming directly from an area infected with cholera, yellow fever or smallpox.

3.2 On departure, no health formalities are required.

## GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1. Customs requirements concerning cargo and other articles
  - 1.1 *Cargo manifest*
    - a) Unless the cargo manifest is supported by air waybills or consignment notes, it will be required that the names and addresses of consignees be stated thereon.
    - b) Information concerning the nature of the goods shall be furnished.
    - c) A list of sealable goods remaining on board an aircraft whether such goods be unconsumed stores or the personal property of the pilot-in-command or members of the crew, shall be presented.
2. Agricultural quarantine requirements
  - 2.1 No person may import into Namibia any animal or parasite or infectious thing except under the authority of the Director of Veterinary Services. Animals as defined in the Act include birds (including poultry). This restriction also applies in respect of such imports from Botswana, Lesotho and Swaziland.
  - 2.2 Requirements for the importation of livestock, biological products, vaccines and raw animal materials can be obtained from the Director of Veterinary Services.
  - 2.3 Import permits for plant materials should be obtained from the Director of Plant and Pests Control.
  - 2.4 Any plant material imported into Namibia, must be inspected and cleared by a Plant Inspector of the Department of Agriculture and Fisheries before it may be removed from the aerodrome of arrival in Namibia.

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## GEN 1.5 AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS

### 1. General

1.1 Aircraft may be employed in Public Transport, Public Transport of Cargo and Aerial Work Operation categories and operating in Namibia must adhere to the provisions of ICAO Annex 6 - Operation of Aircraft, Part 1 - International Commercial Air Transport - Aeroplanes, Chapter 6 (Aeroplane Instruments, Equipment and Flight Documents) and Chapter 7 (Aeroplane Communication and Navigation Equipment) as well as to Part III - International Operations - Helicopters, Chapter 4 (Helicopter Instruments, Equipment and Flight Documents) and Chapter 5 (Helicopter Communication and Navigation Equipment).

1.2 Aircraft employed in the Industrial Aid, Flying Training, Semi-acrobatics, Acrobatics and Special Operation categories and operating in Namibia must adhere to the provisions of ICAO Annex 6 - Operation of Aircraft; Part II - International General Aviation - Aeroplanes, Chapter 6 (Aeroplane Instruments and Equipment) and Chapter 7 (Aeroplane Communication and Navigation Equipment).

### 2. Special equipment to be carried

2.1 All aircraft, except experimental and other aircraft that do not qualify for the use of a certificate of airworthiness, when operating in the airspace above the territory of Namibia, must be equipped with at least one automatically activated Emergency Locator Transmitter (ELT).

#### 2.2 *Global Positioning System (GPS)*

On all internal flights where no or limited ground based navigational facilities are provided, or on aircraft not equipped to use such facilities, the use of satellite navigation (GNSS) as a primary en-route navigation aid on VFR flights and as a secondary en-route navigation aid on IFR flights is permitted.

### 3. Ground/air emergency signalling code

3.1 Efforts should be made to provide as big a colour contrast as possible between the material used for the symbols and the background against which the symbols are exposed.

3.2 Symbols should be at least 2.5 M in height or larger if possible. Care should be taken to lay out symbols exactly as depicted to avoid confusion with other symbols.

3.3 In addition to using these symbols every effort is to be made to attract attention by means of radio, flares, smoke or other available means.

3.4 A space of 3 M should separate the symbols when more than one symbol is used.

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#### Symbols

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1. Require assistance	V
2. Require medical assistance	X
3. No or negative	N
4. Yes or affirmative	Y
5. Proceeding in this direction	↑

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## GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS/CONVENTIONS

Following is a list of civil aviation legislation, air navigation regulations, etc. in force in Namibia. It is essential that anyone engaged in air operations be acquainted with the relevant regulations. Copies of these documents may be obtained from:

Executive Director: Namibia Civil Aviation Authority  
Private Bag 12003  
Windhoek  
Namibia

### 1. Acts and regulations

#### 1.1 *Aviation Act, 1962 (Act No 74 of 1962) as amended*

Giving effect to certain International Aviation Conventions and making provision for the control, regulation and encouragement of flying within Namibia and for other matters incidental thereto.

#### 1.2 *Carriage by Air Act, 1946 (Act 17 of 1946) as amended*

Giving effect to a Convention for the unification of certain rules relating to international carriage by air, making provision for applying the rules contained in the said Convention; subject to exceptions, adoptions and modifications to carriage by air which is not international carriage within the meaning of the Convention; and for matters incidental thereto.

#### 1.3 *Air Services Act, 1949 (Act 51 of 1949) as amended*

Providing for the licensing and control of air carriers and air services.

#### 1.4 *Civil Aviation Offences Act, 1972 (Act 10 of 1972) as amended*

Giving effect to the Convention on Offences and certain other Acts committed on board aircraft; the Convention for the Suppression of unlawful Seizure of Aircraft; and the Convention for the Suppression of unlawful Acts against the safety of Civil Aviation; providing for additional measures directed at the more effective control of the safety of aircraft,

designated airports and the like, and providing for matters connected therewith.

#### 1.5 *Road Transportation Act, 1977 (Act 74 of 1977) as amended*

Providing for certain forms of control of road transportation (and providing for the establishment of the Transportation Commission of Namibia as referred to in the Air Services Act, 1949, as amended).

#### 1.6 *Civil Air Services Regulation, 1964, as amended*

Providing for the classification of air services, the manner of publication of notices, the contents of certain notices of application, the manner and form of publications, the forms of licenses, operating certificates and summons. Providing further for fees to be paid and minimum insurance levels.

#### 1.7 *State Airport Regulations, 1963, as amended*

Providing for the use and administration of state airports.

#### 1.8 *Regulations regarding the Investigation of Aircraft Accidents, 1973, as amended*

Providing for the investigation of aircraft accidents and incidents.

#### 1.9 *Air Navigation Regulations, 1976, as amended*

Providing for the administration and control of aviation in Namibia and of matters incidental thereto.

### 2. International agreements/conventions

2.1 The Convention on International Civil Aviation (The Chicago Convention).

2.2 The International Air Services Transit Agreement.

2.3 Convention for the Unification of Certain Rules relating to International Carriage by Air (The Warsaw Convention).

2.4 The Convention on Offences and Certain Other Acts Committed on Board Aircraft (The Tokyo Convention).

2.5 The Convention for the Suppression of Unlawful Seizure of Aircraft (The Hague Convention).

2.6 The Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation (The Montreal Convention).

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## GEN 1.7 DIFFERENCES FROM ICAO STANDARDS, RECOMMENDED PRACTICES AND PROCEDURES

1. **ANNEX 1** - Personnel licensing, Twelfth (12<sup>th</sup>) edition: NIL.
2. **ANNEX 2** - Rules of the Air, Tenth (10<sup>th</sup>) edition: NIL.
3. **ANNEX 3** - Meteorological services for International Air Navigation, Twentieth (20<sup>th</sup>) edition: NIL.
  - Part I – Core SARP's
  - Part II – Appendices and attachments
4. **ANNEX 4** - Aeronautical Chart, Eleventh (11<sup>th</sup>) Edition: NIL.
5. **ANNEX 5** - Units of Measurement to be used in Air and Ground Operations, Fifth (5<sup>th</sup>) edition: NIL.
6. **ANNEX 6** - Operation of Aircraft:
  - Part I - Eleventh (11<sup>th</sup>) edition: NIL.
  - Part II - Tenth (10<sup>th</sup>) edition: NIL.
  - Part III - Ninth (9<sup>th</sup>) edition: NIL.
7. **ANNEX 7** - Aircraft Nationality and Registration Marks, Sixth (6<sup>th</sup>) edition: NIL.
8. **ANNEX 8** - Airworthiness of Aircraft, Twelfth (12<sup>th</sup>) edition: NIL.
9. **ANNEX 9** - Facilitation, Fifteenth (15<sup>th</sup>) edition: NIL.
10. **ANNEX 10** - Aeronautical Telecommunications
  - Volume 1 - Seventh (7<sup>th</sup>) edition: NIL.
  - Volume II - Seventh (7<sup>th</sup>) edition: NIL.
  - Volume III - Second (2<sup>nd</sup>) edition: NIL.
  - Volume IV - Fifth (5<sup>th</sup>) edition: NIL.
  - Volume V - Third (3<sup>rd</sup>) edition: NIL.
11. **ANNEX 11** - Air Traffic Services, Fifteenth (15<sup>th</sup>) edition:
  - Chapter 2: General
    - Para 2.10.3.2 & 2.10.3.2.1: Namibian airspace is established in some CTA which does not provide 700FT clearance from terrain
12. **ANNEX 12** - Search and Rescue, Eighth (8<sup>th</sup>) edition: NIL.
13. **ANNEX 13** - Aircraft Accident Investigation; Eleventh (11<sup>th</sup>) edition: NIL.
14. **ANNEX 14** - Aerodromes
  - Volume I - Eighth (8<sup>th</sup>) edition: NIL.
  - Volume II - Fourth (4<sup>th</sup>) edition: NIL.

15. **ANNEX 15** - Aeronautical Information Services, Sixteenth (16<sup>th</sup>) edition:

Chapter 2: Responsibilities and Functions

Para 2.2.3: Namibia does not provide a H24 service including NOF

16. **ANNEX 16** - Environmental Protection

Volume I - Eighth (8<sup>th</sup>) edition: NIL.

Volume II - Fourth (4<sup>th</sup>) edition: NIL.

Volume III - First (1<sup>st</sup>) edition: NIL.

Volume IV - First (1<sup>st</sup>) edition: NIL.

17. **ANNEX 17** - Security, Safeguarding International Civil Aviation against Acts of Unlawful Interference, Tenth (10<sup>th</sup>) edition: NIL.

18. **ANNEX 18** - The Safe Transport of Dangerous Goods by Air, Fourth (4<sup>th</sup>) edition: NIL.

19. **ANNEX 19** - Safety Management, First (1<sup>st</sup>) edition: NIL

**PANS-ATM:** NIL

**PANS-OPS:** NIL

## GEN 2. TABLES AND CODES

### GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

#### 1. Units of measurement

The table of units of measurement shown below will be used by aeronautical stations within the Windhoek FIR for air and ground operations.

For measurement of	Units used
Distance used in navigation, position reporting, etc. - generally in excess of 2 nautical miles	Nautical Miles and tenths
Relatively short distances such as those relating to airports (e.g. runway lengths)	Metres
Altitudes, elevations and heights	Feet
Horizontal speed including wind speed	Knots
Vertical speed	Feet per minute
Wind direction for landing and taking off	Degrees Magnetic
Wind direction except for landing and taking off	Degrees True
Visibility including runway visual range	Kilometres or metres
Altimeter setting	Hectopascal
Temperature	Degrees Celsius
Weight	Metric tons or Kilograms
Time	Hours and minutes, beginning at midnight UTC

#### 2. Temporal Reference System

##### 2.1 *General*

2.1.1 Co-ordinated Universal Time (UTC) is used by air navigation services and in publications issued by the Aeronautical Information Service. Reporting of time is expressed to the nearest minute, e.g. 12:40:35 is reported as 1241. Time checks to aircraft are accurate to within 5 seconds.

#### 3. Horizontal Reference System

##### 3.1 Name/ Designation of system

All published geographical coordinates indicating latitude and longitude are expressed in terms of the

World Geodetic System - 1984 (WGS-84) geodetic reference datum.

##### 3.2 Area of application

The area of application for the published geographical coordinates coincides with the area of responsibility of the aeronautical Information Service, i.e. the entire territory of The Republic of Namibia encompassed by the FYWF FIR.

##### 3.3 Use of an asterisk to identify published geographical coordinates

An asterisk (\*) will be used to identify those published geographical coordinates which are not expressed in WGS-84 coordinates and whose accuracy of original field work does not meet the

accuracy requirements in Annex 11, Chapter 2 and Annex 14, Volume I and II, Chapter 2.

*Note:* Guidance material on the aeronautical data quality requirements is contained in the World Geodetic System-1984 (WGS-84) manual, Doc 9674.

**Note:** When a public holiday falls on a Sunday the following Monday shall also be a public holiday unless that Monday is a public holiday. Some administrative services may not be available and banks and other institutions may not be open on these days.

Good Friday, Easter Day, Easter Monday and Ascension Day are also recognised Public Holidays but the dates are determined yearly.

#### 4. Vertical Reference System

##### 4.1 Name/ designation of system

Mean sea level (MSL) datum, must be used as the vertical reference system for air navigation.

##### 4.2 Geoid model

The Earth Gravitational Model – 1996 (EGM-96), must be used by international air navigation as the global gravity model.

#### 5. Aircraft nationality and registration markings

The nationality mark for aircraft registered in Namibia is V5. The nationality mark is followed by a hyphen and a registration mark consisting of letters e.g. V5-ABC.

#### 6. Public holidays

Name	Date/Day
New Year's Day	01 January
Independence Day	21 March
May Day	01 May
Cassinga Day	04 May
Africa Day	25 May
Heroes' Day	26 August
International Human Rights Day	10 December
Christmas Day	25 December
Family Day	26 December

## GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

‡ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

\* Signal is also available for use in communicating with the maritime mobile service.

# Signal for use in the teletypewriter service only.

~ Non-ICAO

### A

A	Amber
AAA	(or AAB, AAC ... etc., in sequence) Amended meteorological message (message type designator)
A/A	Air-to-air
AAIM	Aircraft autonomous integrity monitoring
AAD	Assigned altitude deviation
AAL	Above aerodrome level
AAR	Air to air refuelling
ABI	Advance boundary information
ABM	Abeam
ABN	Aerodrome beacon
ABT	About
ABV	Above
AC	Altocumulus
ACARS†	(to be pronounced "AY-CARS") Aircraft communication addressing and reporting system
ACAS†	Airborne collision avoidance system
ACC‡	Area control centre or area control
ACCID	Notification of an aircraft accident
ACFT	Aircraft
ACK	Acknowledge
ACL	Altimeter check location
ACN	Aircraft classification number
ACP	Acceptance (message type designator)
ACPT	Accept or accepted
ACT	Activate or activated or activity

AD	Aerodrome
ADA	Advisory area
ADC	Aerodrome chart
ADDN	Addition or additional
ADF‡	Automatic direction-finding equipment
ADIZ†	(to be pronounced "AY-DIZ") Air defence identification zone
ADJ	Adjacent
ADO	Aerodrome office (specify service)
ADR	Advisory route
ADS*	The address (when this abbreviation is used to request a repetition, the question mark (IM) precedes the abbreviation, e.g. IMI ADS) (to be used in AFS as a procedure signal)
ADS-B‡	Automatic dependent surveillance – broadcast
ADS-C‡	Automatic dependent surveillance - contract
ADSU	Automatic dependent surveillance unit
ADVS	Advisory service
ADZ	Advise
AES	Aircraft earth station
AFIL	Flight plan filed in the air
AFIS	Aerodrome flight information service
AFM	Yes or affirm or affirmative or that is correct
AFS	Aeronautical fixed service
AFT...	After ... (time or place)
AFTN‡	Aeronautical fixed telecommunication network
A/G	Air-to-ground
AGA	Aerodromes, air routes and ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical information circular
AIDC	Air traffic services interfacility data communication
AIM	Aeronautical information management

AIP	Aeronautical information publication	APSG	After passing
AIRAC	Aeronautical information regulation and control	APV	Approach procedure with vertical guidance
AIREP†	Air-report	APU	Auxilliary power unit
AIRMET†	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations	ARC	Area chart
AIS	Aeronautical information services	ARNG	Arrange
ALA	Alighting area	ARO	Air traffic services reporting office
ALERFA†	Alert phase	ARP	Aerodrome reference point
ALR	Alerting ( <i>message type designator</i> )	ARP	Air-report ( <i>message type designator</i> )
ALRS	Alerting service	ARQ	Automatic error correction
ALS	Approach lighting system	ARR	Arrive or arrival
ALT	Altitude	ARR	Arrival ( <i>message type designator</i> )
ALTN	Alternate or alternating ( <i>light alternates in colour</i> )	ARS	Special air-report ( <i>message type designator</i> )
ALTN	Alternate ( <i>aerodrome</i> )	ARST	Arresting ( <i>specify (part of) aircraft arresting equipment</i> )
AMA	Area minimum altitude	AS	Altostratus
AMD	Amend or amended ( <i>used to indicate amended meteorological message; message type designator</i> )	ASAP	As soon as possible
AMDT	Amendment ( <i>AIP Amendment</i> )	ASC	Ascend to or ascending to
AMS	Aeronautical mobile service	ASDA	Accelerate-stop distance available
AMSL	Above mean sea level	ASE	Altimetry system error
AMSS	Aeronautical mobile satellite service	ASHTAM	Special series of NOTAM notifying, by means of a specific format, change in activity of volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations
ANC...	Aeronautical charts – 1:500 000 ( <i>followed by name/title</i> )	ASPH	Asphalt
ANCS...	Aeronautical navigation chart – small scale ( <i>followed by name/title and scale</i> )	AT...	At ( <i>followed by time at which weather change is forecast to occur</i> )
ANS	Answer	ATA‡	Actual time of arrival
AOC.	Aerodrome obstacle chart	ATC‡	Air traffic control ( <i>in general</i> )
AO	Aircraft operator	ATCSMAC...	Air traffic control surveillance minimum altitude chart ( <i>followed by name/title</i> )
AP	Airport	ATD‡	Actual time of departure
APAPI†	( <i>to be pronounced "AY-PAPI"</i> ) Abbreviated precision approach path indicator	ATFM	Air traffic flow management
APCH	Approach	ATIS†	Automatic terminal information service
APDC...	Aircraft parking/docking chart ( <i>followed by name/title</i> )	ATM	Air traffic management
APN	Apron	ATN	Aeronautical telecommunications network
APP	Approach control office or approach control or approach control service	ATP...	At ... ( <i>time or place</i> )
APR	April	ATS	Air traffic services
APRX	Approximate or approximately	ATTN	Attention

AT-VASIS†	(to be pronounced "AY-TEE-VASIS") Abbreviated T visual slope indicator	BUFR	Binary universal form for the representation of meteorological data
ATZ	Aerodrome traffic zone		<b>C</b>
AUG	August	...C	Centre (preceded by runway designation number to identify a parallel runway)
AUTH	Authorized or authorization		
AUTO	Automatic		
AUW	All up weight	C	Degrees Celsius (Centigrade)
AUX	Auxiliary	CA	Course to an altitude
AVBL	Available or availability	CAA	Civil aviation authority
AVG	Average	CAT	Category
AVGAS†	Aviation gasoline	CAT	Clear air turbulence
AWOS	Automated weather observation system	CAVOK†	(to be pronounced "KAH-OH-KAY") Visibility, cloud and present weather better than prescribed values or conditions
AWTA	Advise at what time able		
AWY	Airway		
AZM	Azimuth	CB‡	(to be pronounced "CEE BEE") Cumulonimbus
	<b>B</b>	CC	Cirrocumulus
B	Blue	CCA	(or CCB, CCC ... etc., in sequence) Corrected meteorological message (message type designator)
BA	Braking action		
BARO-VNAV†	(to be pronounced "BAA-RO-VEE-NAV") Barometric vertical navigation	CCO	Continuous climb operation
BASE†	Cloud base	CD	Candela
BCFG	Fog patches	CDN	Coordination (message type designator)
BCN	Beacon (aeronautical ground light)	CDO	Continuous descent operations
BCST	Broadcast	CDR	Conditional route
BDRY	Boundary	CF	Change frequency to...
BECMG	Becoming	CF	Course to a fix
BFR	Before	CFM*	Confirm or I confirm (to be used in AFS as a procedure signal)
BKN	Broken		
BL...	Blowing (followed by DU = dust, SA = sand or SN = snow)	CGL	Circling guidance light(s)
BLDG	Building	CH	Channel
BLO	Below clouds	CH#	This is a channel-continuity-check of transmission to permit comparison of your record of channel-sequence numbers of messages received on the channel (to be used in AFS as a procedure signal)
BLW	Below...		
BOMB	Bombing		
BR	Mist		
BRF	Short (used to indicate the type of approach desired or required)	CHEM	Chemical
BRG	Bearing	CHG	Modification (message type designator)
BRKG	Braking		
BS	Commercial broadcasting station	CI	Cirrus
BTL	Between layers	CIDIN†	Common ICAO data interchange network
BTN	Between	CIV	Civil

CK	Check	CTA	Control area
CL	Centre line	CTAM	Climb to and maintain
CLA	Clear type of ice formation	CTC	Contact
CLBR	Calibration	CTL	Control
CLD	Cloud	CTN	Caution
CLG	Calling	CTR	Control zone
CLIMB-OUT	Climb-out area	CU	Cumulus
CLR	Clear(s) or cleared to ... or clearance	CUF	Cumuliform
CLRD	Runway(s) cleared ( <i>used in METAR/SPECI</i> )	CUST	Customs
CLSD	Close or closed or closing	CVR	Cockpit voice recorder
CM	Centimetre	CW	Continuous wave
CMB	Climb to or climbing to	CWY	Clearway
CMPL	Completion or completed or complete		<b>D</b>
CNL	Cancel or cancelled	D	Downward ( <i>tendency in RVR during previous 10 minutes</i> )
CNL	Flight plan cancellation ( <i>message type designator</i> )	D...	Danger area ( <i>followed by identification</i> )
CNS	Communications, navigation and surveillance	DA	Decision altitude
COM	Communications	D-ATIS†	( <i>to be pronounced "DEE-ATIS"</i> ) Data link automatic terminal information service
CONC	Concrete	DCD	Double channel duplex
COND	Condition	DCKG	Docking
CONS	Continuous	DCP	Datum crossing point
CONST	Construction or constructed	DCPC	Direct controller-pilot communications
CONT	Continue(s) or continued	DCS	Double channel simplex
COOR	Coordinate or coordination	DCT	Direct ( <i>in relation to flight plan clearances and type of approach</i> )
COORD	Coordinates	DE*	From ( <i>used to precede the call sign of the calling station</i> ) ( <i>to be used in AFS as a procedure signal</i> )
COP	Change-over point	DEC	December
COR	Correct or correction or corrected ( <i>used to indicate corrected meteorological message: message type designator</i> )	DEG	Degrees
COT	At the coast	DEP	Depart or departure
COV	Cover or covered or covering	DEP	Departure ( <i>message type designator</i> )
CPDLC‡	Controller-pilot data link communications	DEPO	Deposition
CPL	Current flight plan ( <i>message type designator</i> )	DER	Departure end of the runway
CRC	Cyclic redundancy check	DES	Descend to or descending to
CRM	Collision risk model	DEST	Destination
CRP	Compulsory reporting point	DETRESFA†	Distress phase
CRZ	Cruise	DEV	Deviation or deviating
CS	Call sign	DF	Direction finding
CS	Cirrostratus	DFDR	Digital flight data recorder
		DFTI	Distance from touchdown indicator

DH	Decision height	EFIS†	(to be pronounced "EE-FIS") Electronic flight instrument system
DIF	Diffuse		
DIST	Distance	EGNOS†	(to be pronounced "EGG-NOS") EUROPEAN geostationary navigation overlay service
DIV	Divert or diverting		
DLA	Delay or delayed	EHF	Extremely high frequency (30 000 to 300 000 MHZ)
DLA	Delay ( <i>message type designator</i> )	ELBA†	Emergency location beacon - aircraft
DLIC	Data link initiation capability		
DLY	Daily	ELEV	Elevation
DME‡	Distance measuring equipment	ELR	Extra long range
DNG	Danger or dangerous	ELT	Emergency locator transmitter
DOF	Date of flight	EM	Emission
DOM	Domestic	EMBD	Embedded in a layer ( <i>to indicate cumulonimbus embedded in layers of other clouds</i> )
DP	Dew point temperature	EMERG	Emergency
DPT	Depth	END	Stop-end ( <i>related to RVR</i> )
DR	Dead reckoning	ENE	East north east
DR...	Low drifting ( <i>followed by DU = dust, SA = sand or SN = snow</i> )	ENG	Engine
DRG	During	ENR	En route
DS	Dust storm	ENRC...	Enroute chart ( <i>followed by name/title</i> )
DSB	Double sideband	EOBT	Estimated off-block time
DTAM	Descend to and maintain	EQPT	Equipment
DTG	Date-time group	ESE	East-south-east
DTHR	Displaced runway threshold	EST	Estimate or estimated or estimate ( <i>message type indicator</i> )
DTRT	Deteriorate or deteriorating	ETA*‡	Estimated time of arrival or estimating arrival
DTW	Dual tandem wheels	ETD‡	Estimated time of departure or estimating departure
DU	Dust	ETO	Estimated time over significant point
DUC	Dense upper cloud	EUR RODEX	European regional OPMET data exchange
DUPE#	This is a duplicate message ( <i>to be used in AFS as a procedure signal</i> )	EV	Every
DUR	Duration	EVS	Enhanced vision system
D-VOLMET	Data link VOLMET	EXC	Except
DVOR	Doppler VOR	EXER	Exercises or exercising or exercise
DW	Dual wheels	EXP	Expect or expected or expecting
DZ	Drizzle	EXTD	Extend or extending or extended
<b>E</b>			
E	East or eastern longitude		
EAT	Expected approach time		
EB	Eastbound		
EDA	Elevation differential area		
EDTO	Extended diversion time operations		
EEE#	Error ( <i>to be used in AFS as a procedure signal</i> )		
EET	Estimated elapsed time		
EFC	Expect further clearance		
			<b>F</b>
		F	Fixed
		FA	Course from a fix to an altitude
		FAC	Facilities
		FAF	Final approach fix

FAL	Facilitation of international air transport	FR	Fuel remaining
FAP	Final approach point	FREQ	Frequency
FAS	Final approach segment	FRI	Friday
FATO	Final approach and take-off area	FRNG	Firing
FAX	Facsimile transmission	FRONT†	Front ( <i>relating to weather</i> )
FBL	Light ( <i>used to indicate the intensity of weather phenomena, interference or static reports, e.g. FBL RA = light rain</i> )	FROST†	Frost (used in aerodrome warnings)
FC	Funnel cloud ( <i>tornado or water spout</i> )	FRQ	Frequent
FCST	Forecast	FSL	Full stop landing
FCT	Friction coefficient	FSS	Flight service station
FDPS	Flight data processing system	FST	First
FEB	February	FT	Feet ( <i>dimensional unit</i> )
FEW	Few	FTE	Flight technical error
FG	Fog	FTP	Fictitious threshold point
FIC	Flight information centre	FTT	Flight technical tolerance
FIR‡	Flight information region	FU	Smoke
FIS	Flight information service	FZ	Freezing
FISA	Automated flight information service	FZDZ	Freezing drizzle
FL	Flight level	FZFG	Freezing fog
FLD	Field	FZRA	Freezing rain
FLG	Flashing		<b>G</b>
FLR	Flares	G	Green
FLT	Flight	G...	Variations from the mean wind speed (gusts) ( <i>followed by figures in METAR/SPECI and TAF</i> )
FLTCK	Flight check	GA	Go ahead, resume sending ( <i>to be used in AFS as a procedure signal</i> )
FLUC	Fluctuating or fluctuation or fluctuated	GA	General Aviation
FLW	Follow(s) or following	G/A	Ground-to-air
FLY	Fly or flying	G/A/G	Ground-to-air and air-to-ground
FM	Course from a fix to manual termination (used in navigation database coding)	GAGAN†	GPS and geostationary earth orbit augmented navigation
FM	From	GAIN	Airspeed or headwind gain
FM...	From ( <i>followed by time weather change is forecast to begin</i> )	GAMET	Area forecast for low-level flights
FMC	Flight management computer	GARP	GBAS azimuth reference point
FMS‡	Flight management system	GBAS†	( <i>to be pronounced "GEE-BAS"</i> ) Ground-based augmentation system
FMU	Flow management unit	GCA‡	Ground controlled approach system or ground controlled approach
FNA	Final approach	GEN	General
FPAP	Flight path alignment point	GEO	Geographic or true
FPL	Flight plan	GES	Ground earth station
FPM	Feet per minute	GLD	Glider
FPR	Flight plan route	GLONASS†	( <i>to pronounced "GLO-NAS"</i> ) Global orbiting navigation satellite system
		GLS‡	GBAS landing system

GMC...	Ground movement chart ( <i>followed by name/title</i> )	HLS	Helicopter landing site
GND	Ground	HM	Holding/racetrack to a manual termination
GNDCK	Ground check	HN	Sunset to sunrise
GNSS‡	Global navigation satellite system	HO	Service available to meet operational requirements
GOV	Government	HOL	Holiday
GP	Glide path	HOSP	Hospital aircraft
GPA	Glide path angle	HPA	Hectopascal
GPIP	Glide path intercept point	HR	Hours
GPS‡	Global positioning system	HS	Service available during hours of scheduled operations
GPWS‡	Ground proximity warning system	HUD	Head-up display
GR	Hail	HUM	Humanitarian
GRAS†	( <i>to be pronounced "GRASS"</i> ) Ground-based regional augmentation system	HURCN	Hurricane
GRASS	Grass landing area	HVDF	High and very high frequency direction-finding stations ( <i>at the same location</i> )
GRIB	Processed meteorological data in the form of grid point values expressed in binary form ( <i>meteorological code</i> )	HVY	Heavy
GRN~	Government of the republic of Namibia	HVY	Heavy ( <i>used to indicate the intensity of weather phenomena e.g. HVY RA = heavy rain</i> )
GRVL	Gravel	HX	No specific working hours
GS	Ground speed	HYR	Higher
GS	Small hail and/or snow pellets	HZ	Haze
GUND	Geoid undulation	HZ	Hertz ( <i>cycle per second</i> )
	<b>H</b>		<b>I</b>
H	High pressure area or the centre of high pressure	IAC...	Instrument approach chart ( <i>followed by name/title</i> )
H	Significant wave height ( <i>followed by figured in METAR/SPECI</i> )	IAF	Initial approach fix
H24	Continuous day and night service	IAO	In and out of clouds
HA	Holding/racetrack to an altitude	IAP	Instrument approach procedure
HAPI	Helicopter approach path indicator	IAR	Intersection of air routes
HBN	Hazard beacon	IAS	Indicated airspeed
HDF	High frequency direction-finding station	IBN	Identification beacon
HDG	Heading	ICAO	International Civil Aviation Organisation
HEL	Helicopter	ICE	Icing
HF‡	High frequency (3 000 to 30 000 kHz)	ID	Identifier or identify
HF	Holding/racetrack to a fix	IDENT†	Identification
HGT	Height or height above	IF	Intermediate approach fix
HJ	Sunrise to sunset	IFF	Identification friend/foe
HLDG	Holding	IFR‡	Instrument flight rules
HLP	Heliport	IGA	International general aviation
		ILS‡	Instrument landing system
		IM	Inner marker

IMC‡	Instrument meteorological conditions	KW	Kilowatts
			<b>L</b>
IMG	Immigration	...L	Left ( <i>preceded by runway designation number to identify a parallel runway</i> )
IMI*	Interrogation sign (question mark) ( <i>to be used in AFS as a procedure signal</i> )	L	Litre
IMPR	Improve or improving	L	Locator (see LM, LO)
IMT	Immediate or immediately	L	Low pressure area or the centre of low pressure
INA	Initial approach		
INBD	Inbound	LAM	Logical acknowledgement ( <i>message type indicator</i> )
INC	In cloud		
INCERFA†	Uncertainty phase	LAN	Inland
INCORP	Incorporated	LAT	Latitude
INFO†	Information	LCA	Local or locally or location or located
INOP	Inoperative		
INP	If not possible	LDA	Landing distance available
INPR	In progress	LDAH	Landing distance available, helicopter
INS	Inertial navigation system	LDG	Landing
INSTL	Install or installed or installation	LDI	Landing direction indicator
INSTR	Instrument	LEN	Length
INT	Intersection	LF	Low frequency (30 to 300 KHZ)
INTL	International	LGT	Light or lighting
INTRG	Interrogator	LGTD	Lighted
INTRP	Interrupt or interruption or interrupted	LIH	Light intensity high
INTSF	Intensify or intensifying	LIL	Light intensity low
INTST	Intensity	LIM	Light intensity medium
IR	Ice on runway	LINE	Line (used in SIGMET)
IRS	Inertial reference system	LM	Locator, middle
ISA	International standard atmosphere	LMT	Local mean time
ISB	Independent sideband	LNAV†	(to be pronounced "EL-NAV") Lateral navigation
ISOL	Isolated	LNG	Long ( <i>used to indicate the type of approach desired or required</i> )
J			
JAN	January	LO	Locator, outer
JTST	Jet stream	LOC	Localizer
JUL	July	LONG	Longitude
JUN	June	LORAN†	LORAN ( <i>long range air navigation system</i> )
	<b>K</b>		
KG	Kilograms	LOSS	Airspeed or headwind loss
KHZ	Kilohertz	LPV	Localizer performance with vertical guidance
KIAS	Knots indicated airspeed		
KM	Kilometres	LR	The last message received by me was...( <i>to be used in AFS as a procedure signal</i> )
KMH	Kilometres per hour		
KPA	Kilopascal	LRG	Long range
KT	Knots		

LS	The last message sent by me was...or Last message was...(to be used in AFS as a procedure signal)	MET REPORT	Local routine meteorological report (in abbreviated plain language)
LTA	Lower control area	MF	Medium frequency (300 to 3 000 KHZ)
LTD	Limited	MHA	Minimum holding altitude
LTP	Landing threshold point	MHDF	Medium and high frequency direction-finding stations (at the same location)
LV	Light and variable (relating to wind)	MHVDF	Medium, high and very high frequency direction-finding stations (at the same location)
LVE	Leave or leaving	MHZ	Megahertz
LVL	Level	MID	Mid-point (related to RVR)
LVP	Low visibility procedures	MIFG	Shallow fog
LYR	Layer or layered	MIL	Military
<b>M</b>			
...M	Metres (preceded by figures)	MIN*	Minutes
M...	Mach number (followed by figures)	MIS	Missing...(transmission identification) (to be used in AFS as a procedure signal)
M...	Minimum value of runway visual range (followed by figures in METAR/SPECI)	MKR	Marker radio beacon
MAA	Maximum authorized altitude	MLS‡	Microwave landing system
MAG	Magnetic	MM	Middle marker
MAHF	Missed approach holding fix	MNM	Minimum
MAINT	Maintenance	MNPS	Minimum navigation performance specifications
MAP	Aeronautical maps and charts	MNT	Monitor or monitoring or monitored
MAPT	Missed approach point	MNTN	Maintain
MAR	At sea	MOA	Military operating area
MAR	March	MOC	Minimum obstacle clearance (required)
MATF	Missed approach turning fix	MOCA	Minimum obstacle clearance altitude
MATZ	Military aerodrome traffic zone	MOD	Moderate (used to indicate the intensity of weather phenomena, interference or static reports e.g. MODRA = moderate rain)
MAX	Maximum	MON	Above mountains
MAY	May	MON	Monday
MBST	Microburst	MOPS†	Minimum operational performance standards
MCA	Minimum crossing altitude	MOV	Move or moving or movement
MCTR	Military control zone	MPS	Metres per second
MCW	Modulated continuous wave	MRA	Minimum reception altitude
MDA	Minimum descent altitude	MRG	Medium range
MDF	Medium frequency direction-finding station	MRP	ATS/MET reporting point
MDH	Minimum descent height	MS	Minus
MEA	Minimum en-route altitude	MSA	Minimum sector altitude
MEDEVAC	Medical Evacuation flight		
MEHT	Minimum eye height over threshold (for visual approach slope indicator systems)		
MET†	Meteorological or meteorology		
METAR†	Aerodrome routine meteorological report (in meteorological code)		

MSAS†	(to be pronounced "EM-SAS") Multi-functional transport satellite (MTSAT) satellite-based augmentation system	NIL*†	None or I have nothing to send to you
MSAW	Minimum safe altitude warning	NM	Nautical miles
MSG	Message	NML	Normal
MSL	Mean sea level	NNE	North-north-east
MSR#	Message... (transmission identification) has been misrouted (to used in AFS as a procedure signal)	NNW	North-north-west
MSSR	Monopulse secondary surveillance radar	NO	No (negative) (to used in AFS as a procedure signal)
MT	Mountain	NOF	International NOTAM office
MTOM	Maximum take-off mass	NONSTD	Non-standard
MTU	Metric units	NOSIG†	No significant change (used in trend-type landing forecasts)
MTW	Mountain waves	NOTAM†	A notice containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations
MVDF	Medium and very high frequency direction-finding stations (at the same location)	NOTAMC	Cancelling NOTAM
MWO	Meteorological watch office	NOTAMN	New NOTAM
MX	Mixed type of ice formation (white and clear)	NOTAMR	Replacing NOTAM
<b>N</b>		NOV	November
N	No distinct tendency (in RVR during previous 10 minutes)	NOZ‡	Normal operating zone
N	North or northern latitude	NPA	Non precision approach
NADP	Noise abatement departure procedure	NR	Number
NASC†	National AIS system centre	NRH	No reply heard
NAT	North Atlantic	NS	Nimbostratus
NAV	Navigation	NSC	Nil significant cloud
NAVAID	Navigation aid	NSE	Navigation system error
NB	Northbound	NSW	Nil significant weather
NBFR	Not before	NTL	National
NC	No change	NTZ‡	No transgression zone
NCD	No cloud detected (used in automated METAR/SPECI)	NW	North-west
NDB‡	Non-directional radio beacon	NWB	North-westbound
NDV	No directional variations available (used in automated METAR/SPECI)	NXT	Next
NE	North-east	<b>O</b>	
NEB	North-eastbound	OAC	Oceanic area control centre
NEG	No or negative or permission not granted or that is not correct	OAS	Obstacle assessment surface
NGT	Night	OBS	Observe or observed or observation
		OBSC	Obscure or obscured or obscuring
		OBST	Obstacle
		OCA	Obstacle clearance altitude
		OCA	Oceanic control area
		OCC	Occulting (light)

OCH	Obstacle clearance height	PATC...	Precision approach terrain chart ( <i>followed by name/title</i> )
OCNL	Occasional or occasionally		
OCS	Obstacle clearance surface	PAX	Passenger(s)
OCT	October	PBC	Performance-based communication
OFZ	Obstacle free zone	PBN	Performance-based navigation
OGN	Originate ( <i>to be used in AFS as a procedure signal</i> )	PBS	Performance-based surveillance
OHD	Overhead	PCD	Proceed or proceeding
OIS	Obstacle identification surface	PCL	Pilot-controlled lighting
OK	We agree or It is correct ( <i>to be used in AFS as a procedure signal</i> )	PCN	Pavement classification number
OLDI†	On-line data interchange	PCT	Percent
OM	Outer marker	PDC‡	Pre-departure clearance
OPA	Opaque, white type of ice formation	PDG	Procedure design gradient
OPC	The control indicated is operational control	PER	Performance
OPMET†	Operational meteorological ( <i>information</i> )	PERM	Permanent
OPN	Open or opening or opened	PIB	Pre-flight information bulletin
OPR	Operator or operate or operative or operating or operational	PJE	Parachute jumping exercise
OPS†	Operations	PL	Ice pellets
O/R	On request	PLA	Practice low approach
ORD	Order	PLVL	Present level
OSV	Ocean station vessel	PN	Prior notice required
OTLK	Outlook ( <i>used in SIGMET messages for volcanic ash and tropical cyclones</i> )	PNR	Point of no return
OTP	On top	PO	Dust/sand whirls ( <i>dust devils</i> )
OTS	Organized track system	POB	Persons on board
OUBD	Outbound	POSS	Possible
OVC	Overcast	PPI	Plan position indicator
	<b>P</b>	PPR	Prior permission required
P...	Maximum value of wind speed or runway visual range ( <i>followed by figures in METAR/SPECI and TAF</i> )	PPSN	Present position
P...	Prohibited area ( <i>followed by identification</i> )	PRFG	Aerodrome partially covered by fog
PA	Precision approach	PRI	Primary
PALS	Precision approach lighting system ( <i>specify category</i> )	PRKG	Parking
PANS	Procedures for air navigation services	PROB†	Probability
PAPI†	Precision approach path indicator	PROC	Procedure
PAR‡	Precision approach radar	PROV	Provisional
PARL	Parallel	PROP	Propeller
		PRP	Point-in-space reference point
		PS	Plus
		PSG	Passing
		PSN	Position
		PSP	Pierced steel plank
		PSR‡	Primary surveillance radar
		PSYS	Pressure systems
		PTN	Procedure turn
		PTS	Polar track structure
		PWR	Power

Q		R	Red
QD	Do you intend to ask me for a series of bearings? Or I intend to ask you for a series of bearings ( <i>to be used in radiotelegraphy as a Q code</i> )	R...	Restricted area ( <i>followed by identification</i> )
QDM‡	Magnetic heading ( <i>zero wind</i> )	R...	Runway ( <i>followed by figures in METAR/SPECI</i> )
QDR	Magnetic bearing	R*	Received ( <i>acknowledgement of receipt</i> ) ( <i>to be used in AFS as a procedure signal</i> )
QFE‡	Atmospheric pressure at aerodrome elevation ( <i>or at runway threshold</i> )	RA	Rain
QFU	Magnetic orientation on runway	RA	Resolution advisory
QGE	What is my distance to your station? or Your distance to my station is ( <i>distance figures and units</i> ) ( <i>to be used in radiotelegraphy as a Q Code</i> )	RAC	Rules of the air and air traffic services
QJH	Shall I run my test tape/a test sentence? or Run your test tape/a test sentence ( <i>to be used in AFS as a Q Code</i> )	RAG	Ragged
QNH‡	Altimeter sub-scale setting to obtain elevation when on the ground	RAG	Runway arresting gear
QSP	Will you relay to...free of charge? or I will relay to...free of charge ( <i>to be used in AFS as a Q Code</i> )	RAI	Runway alignment indicator
QTA	Shall I cancel telegram number...? or Cancel telegram number...(to be used in AFS as a Q Code)	RAIM†	Receiver autonomous integrity monitoring
QTE	True bearing	RASC†	Regional AIS system centre
QTF	Will you give me the position of my station according to the bearings taken by the D/F stations which you control? or The position of your station according to the bearings taken by the D/F station I control was... latitude...longitude (or other indication of position), class... at...hours ( <i>to be used in radiotelegraphy as a Q Code</i> )	RASS	Remote altimeter setting source
QUAD	Quadrant	RB	Rescue boat
QUJ	Will you indicate the TRUE track to reach you? or The TRUE track to reach me is...degrees at...hours ( <i>to be used in radiotelegraphy as a Q Code</i> )	RCA	Reach cruising altitude
	<b>R</b>	RCC	Rescue coordination centre
...R	Right ( <i>preceded by runway designation number to identify a parallel runway</i> )	RCC	Radiocommunication failure ( <i>message type designator</i> )
R...	Radial	RCF	Reach or reaching
R	Rate of turn	RCH	Runway centre line
		RCL	Runway centre line light(s)
		RCLL	Recleared
		RCLR	Required communication performance
		RCP‡	Reference datum height (for ILS)
		RDH	Radial
		RDL	Radio
		RDO	Radioactive
		RDOACT	Recent ( <i>used to qualify weather phenomena, e.g. RERA = recent rain</i> )
		RE	Receive or receiver
		REC	Runway edge light(s)
		REDL	Reference to ... or refer to ...
		REF	Registration
		REG	Runway end light(s)
		RENL	Report or reporting or reporting point
		REP	Request or requested
		REQ	Re-route
		RETE	

RESA	Runway end safety area	RTD	Delayed ( <i>used to indicate delayed meteorological message; message type designator</i> )
RF	Constant radius arc to a fix	RTE	Route
RFFS	Rescue and firefighting services	RTF	Radiotelephone
RG	Range ( <i>lights</i> )	RTG	Radiotelegraph
RHC	Right-hand circuit	RTHL	Runway threshold light(s)
RIF	Reclearance in flight	RTN	Return or returned or returning
RIME†	Rime ( <i>used in aerodrome warnings</i> )	RTODAH	Rejected take-off distance available, helicopter
RL	Report leaving	RTS	Return to service
RLA	Relay to	RTT	Radioteletypewriter
RLCE	Request level change en route	RTZL	Runway touchdown zone light(s)
RLLS	Runway lead-in lighting system	RUT	Standard regional route transmitting frequencies
RLNA	Request level not available	RV	Rescue vessel
RMK	Remark	RVA	Radar vectoring area
RNAV†	( <i>to be pronounced "AR-NAV"</i> ) Area navigation	RVR‡	Runway visual range
RNG	Radio range	RVSM‡	Reduced vertical separation minimum (300 m(1 000 ft) between FL290 and FL410)
RNP‡	Required navigation performance	RWY	Runway
ROBEX†	Regional OPMET bulletin exchange ( <i>scheme</i> )		
ROC	Rate of climb		<b>S</b>
ROD	Rate of descent	S...	State of the sea ( <i>followed by figures in METAR/SPECI</i> )
RON	Receiving only	S	South or southern latitude
RPDS	Reference path data selector	SA	Sand
RPI‡	Radar position indicator	SALS	Simple approach lighting system
RPL	Repetitive flight plan	SAN	Sanitary
RPLC	Replace or replaced	SAR	Search and rescue
RPS	Radar position symbol	SARPS	Standards and Recommended Practices (ICAO)
RPT*	Repeat or I repeat ( <i>to be used in AFS as a procedure signal</i> )	SAT	Saturday
RQ-*	Request ( <i>to be used in AFS as a procedure signal</i> )	SATCOM†	Satellite communication (used only when referring generally to both voice and data satellite communication or only data satellite data communication)
RQMNTS	Requirements	SATVOICE†	Satellite voice communication
RQP	Request flight plan ( <i>message type designator</i> )	SB	Southbound
RQS	Request supplementary flight plan ( <i>message type designator</i> )	SBAS†	( <i>to be pronounced "ESS-BAS"</i> ) Satellite-based augmentation system
RR	Report reaching	SC	Stratocumulus
RRA	( <i>or RRB, RRC, ... etc., in sequence</i> ) Delayed meteorological message ( <i>message type designator</i> )	SCT	Scattered
RSC	Rescue sub-centre	SD	Standard deviation
RSCD	Runway surface condition		
RSP	Responder beacon		
RSP‡	Required surveillance performance		
RSR	En route surveillance radar		
RSS	Root sum square		

SDBY	Standby		surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost or standing water or water associated with snow, slush, ice or frost on the movement area.
SDF	Step down fix		
SE	South-east		
SEA	Sea ( <i>used in connection with sea-surface temperature and state of the sea</i> )		
SEB	South-eastbound	SOC	Start of climb
SEC	Seconds	SPECI†	Aerodrome special meteorological report ( <i>in meteorological code</i> )
SECN	Section	SPECIAL†	Local special meteorological report ( <i>in abbreviated plain language</i> )
SECT	Sector	SPI	Special position indicator
SELCAL†	Selective calling system	SPL	Supplementary flight plan ( <i>message type designator</i> )
SEP	September	SPOC	SAR point of contact
SER	Service or servicing or served	SPOT†	Spot wind
SEV	Severe ( <i>used e.g. to qualify icing and turbulence reports</i> )	SQ	Squall
SFC	Surface	SQL	Squall line
SG	Snow grains	SR	Sunrise
SGL	Signal	SRA	Surveillance radar approach
SH...	Showers ( <i>followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof e.g. SHRASN = showers of rain and snow</i> )	SRE	Surveillance radar element of precision approach radar system
SHF	Super high frequency (3 000 to 30 000 MHz)	SRG	Short range
SI	International system of units	SRR	Search and rescue region
SID†	Standard instrument departure	SRY	Secondary
SIF	Selective identification feature	SS	Sandstorm
SIG	Significant	SS	Sunset
SIGMET†	Information concerning en-route weather and other phenomena in the atmosphere may effect the safety of aircraft operations	SSB	Single sideband
SIMUL	Simultaneous or simultaneously	SSE	South-south-east
SIWL	Single isolated wheel load	SSR‡	Secondary surveillance radar
SKC	Sky clear	SST	Supersonic transport
SKED	Schedule or scheduled	SSW	South-south-west
SLP	Speed limiting point	ST	Stratus
SLW	Slow	STA	Straight-in approach
SMC	Surface movement control	STAR†	Standard instrument arrival
SMR	Surface movement radar	STD	Standard
SN	Snow	STF	Stratiform
SNOCLO	Aerodrome closed due to snow ( <i>used in METAR/SPECI</i> )	STN	Station
SNOWTAM†	A Special series of NOTAM given in a standard format providing a	STNR	Stationary
		STOL	Short take-off and landing
		STS	Status
		STWL	Stopway light(s)
		SUBJ	Subject to
		SUN	Sunday
		SUP	Supplement ( <i>AIP Supplement</i> )
		SUPPS	Regional supplementary procedures

SVC	Service (message type only)	TKOF	Take-off
SVCBL	Serviceable	TL...	Till ( <i>followed by time by which weather change is forecast to end</i> )
SW	South-west	TLOF	Touchdown and lift-off area
SWB	South-westbound	TMA‡	Terminal control area
SWY	Stopway	TN...	Minimum temperature ( <i>followed by figures in TAF</i> )
<b>T</b>			
T	Temperature	TNA	Turn altitude
...T	True (preceded by a bearing to indicate reference to True North)	TNH	Turn height
TA	Traffic advisory	TO...	To... ( <i>place</i> )
TA	Transition altitude	TOC	Top of climb
TAA	Terminal arrival altitude	TODA	Take-off distance available
TACAN†	UHF tactical air navigation aid	TODAH	Take-off distance available, helicopter
TAF†	Aerodrome forecast ( <i>in meteorological code</i> )	TOP†	Cloud top
TA/H	Turn at an altitude/height	TORA	Take-off run available
TAIL†	Tail wind	TOX	Toxic
TAR	Terminal area surveillance radar	TP	Turning point
TAS	True airspeed	TR	Track
TAX	Taxiing or taxi	TRA	Temporary reserved airspace
TC	Tropical cyclone	TRANS	Transmits or transmitter
TCAC	Tropical cyclone advisory centre	TREND†	Trend forecast
TCAS RA†	(to be pronounced "TEE-CAS-AR-AY") Traffic alert and collision avoidance system resolution advisory	TRG	Training
TCH	Threshold crossing height	TRL	Transition level
TCU	Towering cumulus	TROP	Tropopause
TDO	Tornado	TS	Thunderstorm ( <i>in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome</i> )
TDZ	Touchdown zone	TS...	Thunderstorm ( <i>followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof e.g. TSRASN = thunderstorm with rain and snow</i> )
TECR	Technical reason	TSUNAMI†	Tsunami (used in aerodrome warnings)
TEL	Telephone	TT	Teletypewriter
TEMPO†	Temporary or temporarily	TUE	Tuesday
TF	Track to fix	TURB	Turbulence
TFC	Traffic	T-VASIS†	( <i>to be pronounced "TEE-VASIS"</i> ) T visual approach slope indicator system
TGL	Touch-and-go landing	TVOR	Terminal VOR
TGS	Taxiing guidance system	TWR	Aerodrome control tower or aerodrome control
THR	Threshold	TWY	Taxiway
THRU	Through		
THU	Thursday		
TIBA†	Traffic information broadcast by aircraft		
TIL†	Until		
TIP	Until past... ( <i>place</i> )		

TX...	Maximum temperature ( <i>followed by figures in TAF</i> )	VAN	Runway control van
TXL	Taxilane	VAR	Magnetic variation
TXT*	Text ( <i>when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT</i> ) (to be used in AFS as a procedure signal)	VAR	Visual-aural radio range
TYP	Type of aircraft	VASIS	Visual approach slope indicator system
TYPH	Typhoon	VC...	Vicinity of the aerodrome ( <i>followed by FG = fog, FC = funnel cloud, SH = shower, PO = dust/sand whirls, BLDU = blowing dust, BLSA = blowing sand or BLSN = blowing snow, DS = duststorm, SS = sandstorm, TS = thunderstorm or VA = volcanic ash, e.g. VCFG = vicinity fog</i> )
<b>U</b>			
U	Upward ( <i>tendency in RVR during previous 10 minutes</i> )	VCY	Vicinity
UA	Unmanned aircraft	VDF	Very high frequency direction-finding station
UAB...	Until advised by...	VER	Vertical
UAC	Upper area control centre	VFR‡	Visual flight rules
UAR	Upper air route	VHF‡	Very high frequency (30 to 300 MHZ)
UAS	Unmanned aircraft system	VI	Heading to an intercept
UDF	Ultra high frequency direction-finding station	VIP‡	Very important person
UFN	Until further notice	VIS	Visibility
UHDT	Unable higher due traffic	VLF	Very low frequency (3 to 30 KHZ)
UHF‡	Ultra high frequency (300 to 3 000 MHZ)	VLR	Very long range
ULM	Ultralight motorised aircraft	VM	Heading to a manual termination
UIC	Upper information centre	VMC‡	Visual meteorological conditions
UIR‡	Upper flight information region	VNAV†	(to be pronounced "VEE-NAV") Vertical navigation
ULR	Ultra long range	VOL	Volume ( <i>followed by I, II, ...</i> )
UNA	Unable	VOLMET†	Meteorological information for aircraft in flight
UNAP	Unable to approve	VOR‡	VHF omnidirectional radio range
UNL	Unlimited	VORTAC†	VOR and TACAN combination
UNREL	Unreliable	VOT	VOR airborne equipment test facility
UP	Unidentified precipitation ( <i>used in automated METAR/SPECI</i> )	VPA	Vertical path angle
U/S	Unserviceable	VRB	Variable
UTA	Upper control area	VSA	By visual reference to the ground
UTC‡	Coordinated Universal Time	VSP	Vertical speed
<b>V</b>			
...V...	Variations from the mean wind direction ( <i>preceded and followed by figures in METAR/SPECI</i> )	VTF	Vector to final
VA	Heading to an altitude	VTOL	Vertical take-off and landing
VA	Volcanic ash	VV...	Vertical visibility ( <i>followed by figures in METAR/SPECI and TAF</i> )
VAAC	Volcanic ash advisory centre	<b>W</b>	
VAC...	Visual approach chart ( <i>followed by name/title</i> )	W	West or western longitude
VAL	In valleys	W	White

W...	Sea-surface temperature ( <i>followed by figures in METAR/SPECI</i> )			<b>Y</b>
WAAS†	Wide area augmentation system	Y		Yellow
WAC...	World Aeronautical Chart - ICAO 1:1 000 000 ( <i>followed by name/title</i> )	YCZ		Yellow caution zone ( <i>runway lighting</i> )
WAFC	World area forecast centre	YES*		Yes (affirmative) ( <i>to be used in AFS as a procedure signal</i> )
WB	Westbound			
WBAR	Wing bar lights	YR		Your
WDI	Wind direction indicator			<b>Z</b>
WDSPR	Widespread	Z		Coordinated Universal Time ( <i>in meteorological messages</i> )
WED	Wednesday			
WEF	With effect from or effective from			
WGS-84	World Geodetic System - 1984			
WI	Within			
WID	Width or wide			
WIE	With immediate effect or effective immediately			
WILCO†	Will comply			
WIND	Wind			
WIP	Work in progress			
WKN	Weaken or weakening			
WNW	West-north-west			
WO	Without			
WPT	Way-point			
WRNG	Warning			
WS	Wind shear			
WSPD	Wind speed			
WSW	West-south-west			
WT	Weight			
WTSPT	Waterspout			
WWW	Worldwide web			
WX	Weather			








**X**

X	Cross			
XBAR	Crossbar ( <i>of approach lighting system</i> )			
XNG	Crossing			
XS	Atmospherics			

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## GEN 2.3 CHART SYMBOLS


### 1. Aerodromes

Civil	
Military	
Joint civil and military	
Emergency or aerodrome with no facilities	
Heliport and helistop	 
Heliport military	

### 2. Airport data


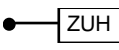




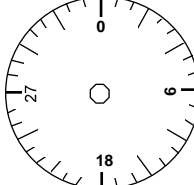
Elevation above sea level	5478
Minimum lighting	L
Runway hard surface	H
Length of longest runway in hundreds of meters	14

Note: A dash (-) is inserted where L or H does not apply

 EROS AIRPORT  
5478 LH 14

 GROOTFONTEIN  
5340 - - 6

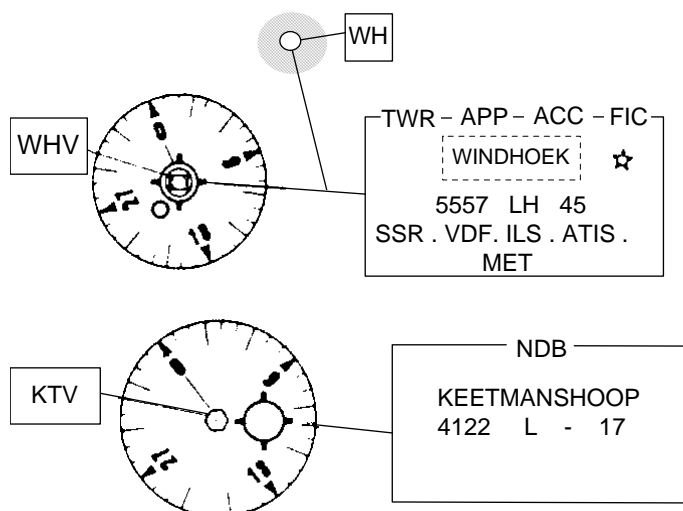
### 3. Radio facilities

Basic radio facility symbol	
Marine non-directional radio beacon (NDB)	
Distance - measuring equipment (DME)	
Co-located VOR and DME facilities	
UHF tactical air navigation facility (TACAN)	
Co-located VOR and TACAN facilities (VORTAC)	
VHF omni-directional radio range (VOR)	

#### 4. Abbreviations

Aerodrome Control Tower	TWR
Instrument Landing System	ILS
Very high frequency direction finding station	VDF
Surveillance radar element	SRE
Precision approach radar	PAR
Ground control approach	GCA
Locator beacon	L
Meteorological service	MET
Automatic terminal information service	ATIS
Terminal area surveillance radar	TAR
Approach control service	APP
Area control centre	ACC
Aerodrome flight information service	AFIS
Flight information service	FIS
Flight information region	FIR
Terminal control area	TMA
Control area	CTA
Heliport, helistop	HP, HST
Secondary surveillance radar	SSR
Advisory area	ADA*
Upper control area	UTA

Example of combination of Airport facilities




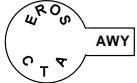




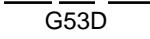
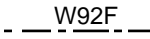

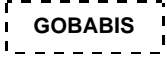


## 5. Navigation lights

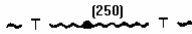














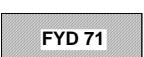
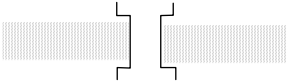
Aerodrome beacon	
Marine light	 <b>Occ W R G</b> //

(Visibility range of marine lights are shown in nautical miles). Marine alternating lights are red and white unless otherwise indicated. Marine lights are white unless colours are stated

F	Fixed
Fl	Flashing
Occ	Occulting
Alt	Alternating
Gp	Group
R	Red
W	White
B	Blue
G	Green
SEC	Sector
sec	Second

## 6. Miscellaneous

Boundary of flight information region (FIR)	
Control area and airway (AWY)	
Control zone (CTR)	
Aerodrome traffic zone (ATZ)	
Combined CTR/ATZ	
Aerodrome traffic area (ATA)	
Advisory route	
Flight information service route	
Reporting point (compulsory and non-compulsory)	
Customs aerodrome	
Isogonic line	
Prominent transmission line	

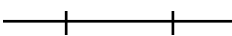
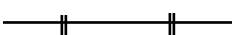
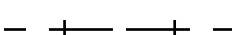

Danger point on transmission line								
Obstruction and group obstruction		<table border="0"> <tr> <td><b>2591</b> <b>(470)</b> <b>(Lighted)</b></td> <td></td> <td></td> <td></td> <td></td> <td><b>4665</b> <b>(470)</b> <b>(Unlighted)</b></td> </tr> </table>	<b>2591</b> <b>(470)</b> <b>(Lighted)</b>					<b>4665</b> <b>(470)</b> <b>(Unlighted)</b>
<b>2591</b> <b>(470)</b> <b>(Lighted)</b>					<b>4665</b> <b>(470)</b> <b>(Unlighted)</b>			
<p>Numerals in italics indicate elevation of top of obstruction above sea level. Vertical numbers in brackets indicate height above ground. Only obstructions of 300' AGL and over are shown</p>								
Prohibited area	<u>Upper limit</u> Lower limit							
Restricted area	<u>Upper limit</u> Lower limit							
Danger area	<u>Upper limit</u> Lower limit							
<p>Numbers refer to RAC 5 of the Aeronautical Information Publication of the relevant country</p>								
Air corridor								

## 7. Topographical symbols

### 7.1 Cities and towns

City (tinted yellow)	 LUDERITZ
Principal town (tinted yellow)	 TSUMEB
Large town (tinted yellow)	 ONDANGWA
Town	 RUNDU
Village	 OPUWO
Place of local importance	 Halali

### 7.2 Railroads

Railroad (single track)	
Railroad (two or more tracks)	
Railroad (under construction)	
Railroad bridge	
Railroad tunnel	
Railroad station and siding	

7.3 *Roads*

Dual highway	
Primary road	
Secondary road	
Other roads	
Road bridge	
Road tunnel	

7.4 *Miscellaneous*

Boundary (international)	
Mine	
Monument	
Charted isolated rock	
Danger line (one fathom line)	
Highest elevation on chart	
Spot elevation	• 4457
Spot elevation (of doubtful accuracy)	• 4457 ±
Building	
Game reserves	

7.5 *Relief Features*

Contours and values	
Approximate contours	
Hill features (not shown by contours)	
Depression contours	
Bluff, cliff or escarpment	
Sand area	
Sand dunes	

7.6 *Hydrographic features*

Lakes (perennial)

Pans (non-perennial)

Dam

Dry pans (stippled brown)

Dry river bed (stippled brown)

Large river (perennial)

Small rivers (perennial)

Rivers and streams (non-perennial)

Rivers and streams (unsurveyed)

Rapids and falls

Marsh or vlei

Shore line

Reefs and ledges

Waterhole



## GEN 2.4 LOCATION INDICATORS

Note: The location indicators marked with an asterisk (\*) cannot be used in the address component of AFS messages

1. ENCODE		2. DECODE	
Location	Indicator	Indicator	Location
AANDSTER	FYAD*	FYAA*	AI-AIS
AIAIBA LODGE	FYAE*	FYAB*	AROAB
AI-AIS	FYAA*	FYAC*	AMBROSE BAY
AMBROSE BAY	FYAC*	FYAD*	AANDSTER
AMEIB RANCH	FYAI*	FYAE*	AIAIBA LODGE
AMINUIS	FYAM*	FYAF*	ANGRA FRIA
ANGRA FRIA	FYAF*	FYAG*	ANIB LODGE
ANIB LODGE	FYAG*	FYAH*	OKOMBAHE
ARABI	FYBI*	FYAI*	AMEIB RANCH
ARANDIS	FYAR*	FYAJ*	KANAAN N/A-AN KUSE DESERT RETRE
ARANOS	FYAN*	FYAK*	AUSSENKEHR
ARIAMSVLEI	FYAV*	FYAL*	AUOB LODGE
AROAB	FYAB*	FYAM*	AMINUIS
AUAS	FYAU*	FYAN*	ARANOS
AUOB LODGE	FYAL*	FYAO*	AURORA
AURORA	FYAO*	FYAR*	ARANDIS
AUS	FYAS*	FYAS*	AUS
AUSSENKEHR	FYAK*	FYAT*	AUTABIB
AUTABIB	FYAT*	FYAU*	AUAS
B2GOLD OTJIKOTO MINE	FYBM*	FYAV*	ARIAMSVLEI
BAGANI	FYBC*	FYBA*	BAGBAG
BAGBAG	FYBA*	FYBB*	BEENBREECK
BEENBREECK	FYBB*	FYBC*	BETHANIEN
BERSEBA	FYBR*	FYBD*	OLD BRANDBERG WEST
BETESDA	FYBE*	FYBE*	BETESDA
BETHANIEN	FYBC*	FYBF*	BOGENFELS
BITTERWASSER	FYBJ*	FYBG*	BAGANI

Note: The location indicators marked with an asterisk (\*) cannot be used in the address component of AFS messages

1. ENCODE		2. DECODE	
Location	Indicator	Indicator	Location
BLAKEWAY	FYBL*	FYBI*	ARABI
BLUMFELDE	FYBO*	FYBJ*	BITTERWASSER
BOGENFELS	FYBF*	FYBK*	BRUKKAROS
BRUKKAROS	FYBK*	FYBL*	BLAKEWAY
BUIITEPOS	FYBT*	FYBM*	B2GOLD OTJIKOTO MINE
BWABWATA	FYBW*	FYBO*	BLUMFELDE
BYSEEWAH	FYBY*	FYBR*	BERSEBA
CAMP EDEN	FYCE*	FYBS*	KALAHARI BUSH BREAKS
CAMP GUBANARE	FYCG*	FYBT*	BUIITEPOS
CAPE CROSS	FYCC*	FYBW*	BWABWATA
CAPE FRIA	FYCF*	FYBY*	BYSEEWAH
CHINA TOWN	FYCT*	FYCA*	KAVANGO CATTLE RANCH
COENBRITZ	FYCO*	FYCB*	CONCEPTION BAY
CONCEPTION BAY	FYCB*	FYCC*	CAPE CROSS
CORDOVA	FYCV*	FYCE*	CAMP EDEN
DAMARALAND CAMP	FYDC*	FYCF*	CAPE FRIA
DEADVLEI	FYDV*	FYCG*	CAMP GUBANARE
DESERT HOMESTEAD	FYDH*	FYCO*	COENBRITZ
DESERT STAR	FYDT*	FYCT*	CHINA TOWN
DIEPRIVIER	FYDR*	FYCV*	CORDOVA
DORDABIS	FYDS*	FYDC	DAMARALAND CAMP
DORO NAWAS	FYDN*	FYDH*	DESERT HOMESTEAD
EDELWEIS FARM	FYEW*	FYDL*	NAMIB DESERT LODGE
EDEN	FYED*	FYDN*	DORO NAWAS
EENHANA	FYEN*	FYDR*	DIEPRIVIER
EHOMBA	FYEH*	FYDS*	DORDABIS
ELISENORE	FYEL*	FYDT*	DESERT STAR
EMERITUS(ONANIS)	FYEM*	FYDU*	ONDUNDU
EPACHA	FYEP*	FYDV*	DEADVLEI
EPAKO	FYEO*	FYEA*	ETENDEKA

EPUKIRO	FYEK*	FYED*	EDEN
EPUPA FALLS	FYEF*	FYEF*	EPUPA FALLS
ERINDI RANCH	FYEI*	FYEG *	ERONGO MOUNTAIN OMBU
ERONGO MOUNTAIN OMBU	FYEG*	FYEH*	EHOMBA
ERMO	FYER*	FYEI*	ERINDI RANCH
ETENDEKA	FYEA*	FYEK*	EPUKIRO
ETOSHA HEIGHTS SAFARIHOEK LODGE	FYSQ*	FYEL*	ELISENORE
ETUNDA	FYEU*	FYEM*	EMERITUS(ONANIS)
ETUSIS	FYET*	FYEN*	EENHANA
FALSENECK	FYFN*	FYEO*	EPAKO
FARM AUBES	FYFA*	FYEP*	EPACHA
FARM EBENEZER	FYFE*	FYER*	ERMO
FARM LINDENHOF	FYFL*	FYET*	ETUSIS
FARM OHORONGO	FYFO*	FYEU*	ETUNDA
FARM WILDACKER	FYFW*	FYEW*	EDELWEIS FARM
GAIAS	FYGX*	FYFA*	FARM AUBES
GAM	FYGA*	FYFE*	FARM EBENEZER
GAMIS	FYGM*	FYFK*	KALAKWA
GELUK	FYGK*	FYFL*	FARM LINDENHOF
GELUKSPUT	FYGP*	FYFN*	FALSENECK
GHAUB	FYGD*	FYFO*	FARM OHORONGO
GHAUSS	FYGS*	FYFW*	FARM WILDACKER
GIBEON	FYGI*	FYGA*	GAM
GOBABEB	FYGO*	FYGB*	GOBABIS
GOBABIS	FYGB*	FYGC*	GOCHAS
GOCHAS	FYGC*	FYGD*	GHAUB
GOLLSCHAU	FYGH*	FYGE*	GRAND VIEW LODGE (FISH RIVER LODGE)
GRAND VIEW LODGE (FISH RIVER LODGE)	FYGE*	FYGF	GROOTFONTEIN
GRASKOP	FYGR*	FYGG*	ONGUMA PLAINS LODGE
GRAVENSTEIN	FYGV*	FYGH*	GOLLSCHAU
GROOTFONTEIN	FYGF	FYGI*	GIBEON

GROSS TSAUB	FYGT*	FYGJ*	GURUS
GRUNAU	FYGN*	FYGK*	GELUK
GURUS	FYGJ*	FYGL*	OMARURU GAME LODGE
HALALI	FYHI*	FYGM*	GAMIS
HAMAS	FYHR*	FYGN*	GRUNAU
HAMMERSTEIN	FYHM*	FYGO*	GOBABEB
HARNAS	FYHA*	FYGP*	GELUKSPUT
HARTMAN'S VALLEY	FYHV*	FYGQ*	OKANGHUDI
HAVANA	FYVA*	FYGR*	GRASKOP
HEFFNER	FYHF*	FYGS*	GHAUSS
HEJA LODGE	FYHJ*	FYGT*	GROSS TSAUB
HELENE	FYHK*	FYGU*	KHAUDUM GAME RESERVE
HELMERINGHAUSEN	FYHH*	FYGV*	GRAVENSTEIN
HENTIES BAY	FYHN*	FYGW*	OTJIMBINGWE
HILKER'S CHEETAH DROME	FYHC*	FYGX*	GAIAS
HOANIB SKELETON COAST	FYHO*	FYHA*	HARNAS
HOBAS	FYHS*	FYHB*	HOHENSTEIN
HOBATERE	FYHT*	FYHC*	HILKER'S CHEETAH DROME
HOHENSTEIN	FYHB*	FYHD*	HOODIA RANCH
HOLSTEIN	FYHE*	FYHE*	HOLSTEIN
HOODIA RANCH	FYHD*	FYHF*	HEFFNER
HOSEA KUTAKO INTL AIRPORT	FYWH	FYHG*	OKATJIHO HUNTING FARM
HUAB LODGE	FYHL*	FYHH*	HELMERINGHAUSEN
IBENSTEIN	FYIB*	FYHI*	HALALI*
IMMELMANN	FYIM*	FYHJ*	HEJA LODGE
IMMENHOF	FYIH*	FYHK*	HELENE
IMPALILA ISLAND	FYII*	FYHL*	HUAB LODGE
INTO AFRICA LODGE	FYIA*	FYHM*	HAMMERSTEIN
JACKS CAMP	FYJC*	FYHN*	HENTIES BAY
KALAHARI BUSH BREAKS	FYBS*	FYHO*	HOANIB SKELETON COAST
KALAHARI GAME LODGE	FYKE*	FYHP*	OKAHIRONGO ELEPHANT
KALAHARI RED DUNES	FYRD*	FYHQ*	WINDHOEK (DIRECTOR: CIVIL AVIATION)

KALAKWA	FYFK*	FYHR*	HAMAS
KALKERUS	FYKL*	FYHS*	HOBAS
KALKRAND	FYKD*	FYHT*	HOBATERE
KAMANJAB	FYKJ*	FYHV*	HARTMAN'S VALLEY
KANAAN N/A-AN KUSE DESERT RETRE	FYAJ*	FYIA*	INTO AFRICA LODGE
KANSIMBA	FYNB*	FYIB*	IBENSTEIN
KARASBURG	FYKB*	FYIC*	OKAHIRONGO RIVER CAMP
KARIBIB	FYKA*	FYIF*	OKAHUA FARM
KARIOS /CANON LODGE	FYKC*	FYIH*	IMMENHOF
KATIMA MULILO	FYKM	FYII*	IMPALILA ISLAND
KATITI OHORONGO	FYKQ*	FYIM*	IMMELMANN
KATITI'S PLACE	FYKF*	FYIR*	OSIRE
KAVANGO CATTLE RANCH	FYCA*	FYIT*	OKARUMUTI
KAVITA LION LODGE	FYKV*	FYJA*	OZONDJAHE
KEERWEERDER	FYRW*	FYJB*	OTJOMBAUE
KEETMANSHOOP	FYKT*	FYJC*	JACKS CAMP
KHAUDUM GAME RESERVE	FYGU*	FYJO*	OTJOVAZANDU
KHORIXAS	FYKX*	FYJU*	OTJIKARU
KHUMIB	FYKI*	FYKA*	KARIBIB
KIRIPOTIB LODGE	FYKH*	FYKB*	KARASBURG
KLEIN AUB	FYUL*	FYKC*	KARIOS/CANON LODGE
KOES	FYKS*	FYKD*	KALKRAND
KOMBAT	FYKO*	FYKE*	KALAHARI GAME LODGE
KOMSBERG	FYMZ*	FYKF*	KATITI'S PLACE
KUIDAS	FYKU*	FYKG*	OKONGO
KUNENE MOUTH	FYMK*	FYKH*	KIRIPOTIB LODGE
KUNENE RIVER LODGE	FYRL*	FYKI*	KHUMIB
KUZIKUS	FYKZ*	FYKJ*	KAMANJAB
LA ROCHELLE	FYLR*	FYKK*	OKOKONGO
LAKE OANOB RESORT	FYLA*	FYKL*	KALKERUS
LANGVERWACHT	FYLW*	FYKM	KATIMA MULILO
LAPA LANGE GAME LODGE	FYLL*	FYKN*	OKONJIMA
LEONARDVILLE	FYLV*	FYKO*	KOMBAT

LEYLANDSDRIFT	FYLD*	FYKP*	OKAPUTA
LIANSHULU	FYLS*	FYKQ*	KATITI OHORONGO
LODGE OKAJO	FYLO*	FYKR*	OKORUSU MINE
LUDERITZ	FYLZ	FYKS*	KOES
MALTAHOHE	FYMH*	FYKT*	KEETMANSHOOP
MANGETTI	FYMT*	FYKU*	KUIDAS
MANGETTI DUNE	FYMD*	FYKV*	KAVITA LION LODGE
MARIENFLUSS	FYMF*	FYKW*	OKANGWATI
MARIENTAL	FYML*	FYKX*	KHORIXAS
MARMORKOPF	FYMA*	FYKY*	UITKYK
MAROELA GAME LODGE	FYMC*	FYKZ*	KUZIKUS
MASBIEKER	FYMS*	FYLA*	LAKE OANOB RESORT
MEOB BAY	FYMB*	FYLD*	LEYLANDSDRIFT
MESSUM CRATAR	FYMJ*	FYLF*	SELF CO 21
MIDGARD	FYMG*	FYLL*	LAPA LANGE GAME LODGE
MILE 72	FYMI*	FYLM*	MOUNTAIN VIEW LODGE
MOKUTI LODGE	FYMO*	FYLO*	LODGE OKAJO
MOUNTAIN VIEW LODGE	FYLM*	FYLR*	LA ROCHELLE
MOUNT ETJO	FYME*	FYLS*	LIANSHULU
MÖWE BAY	FYMW*	FYLV*	LEONARDVILLE
MUSHALA LODGE	FYMU*	FYLW*	LANGWERWACHT
NAANKUSE	FYNH*	FYLZ	LUDERITZ
NAMIB DESERT LODGE	FYDL*	FYMA*	MARMORKOPF
NAMIB NAUKLUFT LODGE	FYNN*	FYMB*	MEOB BAY
NAMTIP	FYNT*	FYMC*	MAROELA GAME LODGE
NAMUSHASHA	FYNL*	FYMD*	MANGETTI DUNE
NAMUTONI	FYNA*	FYME*	MOUNT ETJO
NAUA NAUA	FYNU*	FYMF*	MARIENFLUSS
NEPARA	FYNP*	FYMG*	MIDGARD
NEURAS WINE & WILDLIFE ESTATE	FYNS*	FYMH*	MALTAHOHE
NHOMA	FYNM*	FYMI*	MILE 72
NKONGO	FYNK*	FYMJ*	MESSUM CRATAR
NOORDOEWER	FYND*	FYMK*	KUNENE MOUTH
NUBIB GUEST FARM	FYNF*	FYML*	MARIENTAL

OHANGE NAMIBIA LODGE	FYOX*	FYMM*	OMATAKO HUNTING
OHORONGO	FYOL*	FYMO*	MOKUTI LODGE
OKAHANDJA	FYON*	FYMP*	OKAMAPU
OKAHAO	FYOH*	FYMR*	OMATARAZU
OKAHIRONGO ELEPHANT	FYHP*	FYMS*	MASBIEKER
OKAHIRONGO RIVER CAMP	FYIC*	FYMT*	MANGETTI
OKAHUA FARM	FYIF*	FYMU*	MUSHALA LODGE
OKAKARARA	FYOK*	FYMW*	MÖWE BAY
OKAMAPU	FYMP*	FYMY*	OKAMATAPATI
OKAMATAPATI	FYMY*	FYMZ*	KOMSBURG
OKANDJEKETE	FYNJ*	FYNA*	NAMUTONI
OKANGHUDI	FYGQ*	FYNB*	KANSIMBA
OKANGWATI	FYKW*	FYND*	NOORDOEWER
OKAPERUPERU	FYPR*	FYNE*	ONANIS FARM
OKAPUKA	FYPA*	FYNF*	NUBIB GUEST FARM
OKAPUTA	FYKP*	FYNG*	ONGAVA
OKARUMUTI	FYIT*	FYNH*	NAANKUSE
OKATJIHO HUNTING FARM	FYHG*	FYNJ*	OKANDJEKETE
OKATJURU	FYOF*	FYNK*	NKONGO
OKAUKUEJO	FYOO*	FYNL*	NAMUSHASHA
OKOKONGO	FYKK*	FYNM*	NHOMA
OKOMBAHE	FYAH*	FYNN*	NAMIB NAUKLUFT LODGE
OKOMITUNDU	FYOD*	FYNO*	ONJUVA
OKONGO	FYKG*	FYNP*	NEPARA
OKONGWE	FYOY*	FYNS*	NEURAS WINE & WILDLIFE ESTATE
OKONJIMA	FYKN*	FYNT*	NAMTIP
OKONJIMA OLD	FYOC*	FYNU*	NAUA NAUA
OKORUSU MINE	FYKR*	FYOA	ONDANGWA
OKOZONGOMINGO	FYOZ*	FYOB*	OTJONJISE
OLD BRANDBERG WEST	FYBD*	FYOC*	OKONJIMA OLD
OMARURU	FYOM*	FYOD*	OKOMITUNDU
OMARURU GAME LODGE	FYGL*	FYOE*	OMEGA
OMATAKO HUNTING	FYMM*	FYOF*	OKATJURU
OMATARAZU	FYMR*	FYOG*	ORANJEMUND

OMEGA	FYOE*	FYOH*	OKAHAO
ONANIS FARM	FYNE*	FYOI*	OSHIKANGO
ONDANGWA	FYOA	FYOJ*	OUTJO
ONDUNDU	FYDU*	FYOK*	OKAKARARA
ONGAVA	FYNG*	FYOL*	OHORONGO
ONGUMA PLAINS LODGE	FYGG*	FYOM*	OMARURU
ONGWEDIVA	FYUE*	FYON*	OKAHANDJA
ONJUVA	FYNO*	FYOO*	OKAUKUEJO
OOTMOED	FYOT*	FYOP*	OPUWO
OPERET	FYOU*	FYOQ*	ORUTJANDJA
OPUWO	FYOP*	FYOR*	OROPOKO
ORANJEMUND	FYOG*	FYOS*	OSHAKATI
OROPOKO	FYOR*	FYOT*	OOTMOED
ORUPEMBE	FYPE*	FYOU*	OPERET
ORUTJANDJA	FYOQ*	FYOV*	OTAVI
OSHAKATI	FYOS*	FYOW*	OTJIWARONGO
OSHIKANGO	FYOI*	FYOX*	OHANGE NAMIBIA LODGE
OSIRE	FYIR*	FYOY*	OKONGWE
OSONA	FYSN*	FYOZ*	OKOZONGOMINGO
OTAVI	FYOV*	FYPA*	OKAPUKA
OTJIKARO	FYRO*	FYPE*	ORUPEMBE
OTJIKARU	FYJU*	FYPF*	PHILADELPHIA FARM
OTJIMBINGWE	FYGW*	FYPO*	POKWENI
OTJINENE	FYTN*	FYPR*	OKAPERUPERU
OTJISAZU	FYTZ*	FYPU*	PUROS
OTJITAMBI	FYTU*	FYPW*	PALMWAG
OTJIWA	FYTW*	FYRA*	REDSAND
OTJIWARONGO	FYOW*	FYRC*	RUACANA
OTJOHORONGO	FYTJ*	FYRD*	KALAHARI RED DUNES
OTJOMBAUE	FYJB*	FYRF*	RIETFONTEIN
OTJONJISE	FYOB*	FYRH*	REHOBOTH
OTJOVAZANDU	FYJO*	FYRI*	ROIDINA
OUTAPI	FYUO*	FYRK*	ROCKY POINT
OUTJO	FYOJ*	FYRL*	KUNENE RIVER LODGE
OZONDJAHE	FYJA*	FYRM*	RUIIMTE

PALMWAG	FYPW*	FYRN*	RHINO CAMP
PHILADELPHIA FARM	FYPF*	FYRO*	OTJIKARO
POKWENI	FYPO*	FYRP*	ROSHPINAH
PUROS	FYPU*	FYRR*	RAG ROCK
RAG ROCK	FYRR*	FYRS*	ROOISAND
REDSAND	FYRA*	FYRU*	RUNDU
REHOBOTH	FYRH*	FYRW*	KEERWEERDER
RHINO CAMP	FYRN*	FYRZ*	ROSTOCK
RIETFONTEIN	FYRF*	FYSA*	SKORPION
ROCKY POINT	FYRK*	FYSB*	SPENCER BAY
ROIDINA	FYRI*	FYSC*	SINCLAIRE
ROOISAND	FYRS*	FYSD*	SANDWICH HARBOUR
ROSH PINAH	FYRP*	FYSE*	SOETGRAS
ROSTOCK	FYRZ*	FYSF*	SESFONTEIN
RUACANA	FYRC*	FYSG*	SHADIGONGORO
RUIMTE	FYRM*	FYSH*	STEINHAUSEN
RUNDU	FYRU*	FYSI*	SHITEMO
SANDFONTEIN	FYSJ*	FYSJ*	SANDFONTEIN
SANDWICH HARBOUR	FYSD*	FYSK*	SPITZKOPPE
SARUSAS	FYSR*	FYSL*	SOSSUVLEI MOUNTAIN LODGE
SARUSUS MINE	FYSY*	FYSM*	SWAKOPMUND
SELFCO 21	FYLF*	FYSN*	OSONA
SESFONTEIN	FYSF*	FYSO*	SOLITAIRE
SESRIEM	FYSS*	FYSP*	STAMPRIET
SHADIGONGORO	FYSG*	FYSQ*	ETOSHA HEIGHTS SAFARIHOEK LODGE
SHITEMO	FYSI*	FYSR*	SARUSAS
SINCLAIRE	FYSC*	FYSS*	SESRIEM
SKORPION	FYSA*	FYST*	STRATE
SOETGRAS	FYSE*	FYSU*	SOSSUSVLEI LODGE
SOLITAIRE	FYSO*	FYSV*	SOSSUSVLEI
SONOP	FYTX*	FYSW*	SWARTKRANS
SOSSUSVLEI	FYSV*	FYSX*	SOSSUSVLEI WILD CAMP
SOSSUSVLEI LODGE	FYSU*	FYSY*	SARUSUS MINE
SOSSUSVLEI MOUNTAIN LODGE	FYSL*	FYSZ*	SWARTBOOIDRIFT

SOSSUSVLEI WILD CAMP	FYSX*	FYTA*	TORGOS SAFARIS CAMP
SPENCER BAY	FYSB*	FYTB*	TSAOBIS
SPITZKOPPE	FYSK*	FYTC*	TOSCANINI
STAMPRIET	FYSP*	FYTD*	TSAUCHAB RIVER
STEINHAUSEN	FYSH*	FYTE*	TERRACE BAY
STRATE	FYST*	FYTF*	TWYFELFONTEIN
SWAKOPMUND	FYSM*	FYTG*	TORGA HUNTING FARM
SWARTBOOIDRIFT	FYSZ*	FYTH*	TOSHARI
SWARTKRANS	FYSW*	FYTI*	TIGERFORTE
TALISMANIS	FYTL*	FYTJ*	OTJOHORONGO
TERRACE BAY	FYTE*	FYTK*	TSUMKWE
TIGERFORTE	FYTI*	FYTL*	TALISMANIS
TOK TOKKIE	FYTT*	FYTM*	TSUMEB
TORGA HUNTING FARM	FYTG*	FYTN*	OTJINENE
TORGOS SAFARIS CAMP	FYTA*	FYTO*	TORRA BAY
TORRA BAY	FYTO*	FYTP	TSAUCHAB RIVER CAMP
TOSCANINI	FYTC*	FYTR*	TWEE RIVIEREN
TOSHARI	FYTH*	FYTS*	TSANDI
TSANDI	FYTS*	FYTT*	TOK TOKKIE
TSAOBIS	FYTB*	FYTU*	OTJITAMBI
TSAUCHAB RIVER	FYTD*	FYTV*	TSONDAPVLEI
TSAUCHAB RIVER CAMP	FYTP*	FYTW*	OTJIWA
TSONDAPVLEI	FYTV*	FYTX*	SONOP
TSUMEB	FYTM*	FYTZ*	OTJISAZU
TSUMKWE	FYTK*	FYUA*	UAMUAU
TWEE RIVIEREN	FYTR*	FYUB*	UPPER KHUMIB
TWYFELFONTEIN	FYTF*	FYUE*	ONGWEDIVA
UAMUAU	FYUA*	FYUG*	UGABMUND
UGABMUND	FYUG*	FYUK*	USAKOS
UIS	FYUS*	FYUL*	KLEIN AUB
UITKYK	FYKY*	FYUO*	OUTAPI
UITSPAN	FYUP*	FYUP*	UITSPAN
UPPER KHUMIB	FYUB*	FYUS*	UIS
USAKOS	FYUK*	FYVA*	HAVANA
VERONICA	FYVF*	FYVF*	VERONICA

VINGERKLIP	FYVL*	FYVK*	VOLSTRUISKLOOF
VOLGELSSTRAUSSKLUFT	FYVS*	FYVL*	VINGERKLIP
VOLSTRUISKLOOF	FYVK*	FYVS*	VOLGELSSTRAUSSKLUFT
WABI LODGE	FYWL*	FYWB	WALVIS BAY
WALVIS BAY	FYWB	FYWD*	WOLWEDANS
WALVIS BAY (MET)	FYWW*	FYWE	WINDHOEK/EROS
WARMBAD	FYWM*	FYWG*	WELTEVREDE GUEST FARM
WATERBERG WILDERNESS	FYWN*	FYWH	HOSEA KUTAKO INTL AIRPORT
WELTEVREDE GUEST FARM	FYWG*	FYWI*	WITVLEI
WERELD'S END	FYWR*	FYWK*	WLOTSKAS BAKEN
WINDHOEK (DIRECTOR: CIVIL AVIATION)	FYHQ*	FYWL*	WABI LODGE
WINDHOEK/EROS	FYWE	FYWM*	WARMBAD
WINDHOEK (TOWN MET)	FYWW*	FYWN*	WATERBERG WILDERNESS
WITVLEI	FYWI*	FYWO*	WOLTEMADE
WITWATER	FYWT*	FYWR*	WERELD'S END
WLOTSKAS BAKEN	FYWK*	FYWT*	WITWATER
WOLTEMADE	FYWO*	FYWW*	WALVIS BAY (MET)
WOLWEDANS	FYWD*	FYWW*	WINDHOEK (TOWN MET)
ZEBRA RIVER LODGE	FYZR*	FYZR*	ZEBRA RIVER LODGE

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## GEN 2.5 LIST OF RADIO NAVIGATION AIDS

<i>ID</i>	<i>Station name</i>	<i>Facility</i>	<i>Purpose</i>	<i>Station name</i>	<i>Facility</i>	<i>ID</i>	<i>Purpose</i>
GFV	Grootfontein	VOR	AE	Grootfontein	VOR	GFV	AE
KTV	Keetmanshoop	VOR/DME	AE	Keetmanshoop	VOR/DME	KTV	AE
OAV	Ondangwa	VOR/DME	AE	Ondangwa	VOR/DME	OAV	AE
WBV	Walvis Bay	VOR/DME	AE	Walvis Bay	VOR/DME	WBV	AE
WD	Hosea Kuṭako INTL Airport	ILS	A	Hosea Kuṭako INTL Airport	ILS	WD	A
WHV	Hosea Kuṭako INTL Airport	VOR/DME	AE	Hosea Kuṭako INTL Airport	VOR/DME	WHV	AE

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GEN 2.6 CONVERSION TABLES

NM to KM 1 NM = 1.852 KM		KM to NM 1 KM = 0.54 NM		FT to M 1 FT = 0.3048 M		M to FT 1 M = 3.281 FT	
NM	KM	KM	NM	FT	M	M	FT
0.1	0.185	0.1	0.05	1	0.305	1	3.28
0.2	0.370	0.2	0.11	2	0.610	2	6.56
0.3	0.556	0.3	0.16	3	0.914	3	9.84
0.4	0.741	0.4	0.22	4	1.219	4	13.12
0.5	0.926	0.5	0.27	5	1.524	5	16.40
0.6	1.111	0.6	0.32	6	1.829	6	19.69
0.7	1.296	0.7	0.38	7	2.134	7	22.97
0.8	1.482	0.8	0.43	8	2.438	8	26.25
0.9	1.667	0.9	0.49	9	2.743	9	29.53
1	1.852	1	0.54	10	3.048	10	32.81
2	3.704	2	1.08	20	6.096	20	65.62
3	5.556	3	1.62	30	9.144	30	98.43
4	7.408	4	2.16	40	12.192	40	131.23
5	9.260	5	2.70	50	15.240	50	164.04
6	11.112	6	3.24	60	18.288	60	196.85
7	12.964	7	3.78	70	21.336	70	229.66
8	14.816	8	4.32	80	24.384	80	262.47
9	16.668	9	4.86	90	27.432	90	295.28
10	18.520	10	5.40	100	30.480	100	328.08
20	37.040	20	10.80	200	60.960	200	656.17
30	55.560	30	16.20	300	91.440	300	984.25
40	74.080	40	21.60	400	121.920	400	1 312.34
50	92.600	50	27.00	500	152.400	500	1 640.42
60	111.120	60	32.40	600	182.880	600	1 968.50
70	129.640	70	37.80	700	213.360	700	2 296.59
80	148.160	80	43.20	800	243.840	800	2 624.67
90	166.680	90	48.60	900	274.320	900	2 952.76
100	185.200	100	54.00	1 000	304.800	1 000	3 280.84
200	370.400	200	107.99	2 000	609.600	2 000	6 561.68
300	555.600	300	161.99	3 000	914.400	3 000	9 842.52
400	740.800	400	215.98	4 000	1 219.200	4 000	13 123.36

NM to KM 1 NM = 1.852 KM		KM to NM 1 KM = 0.54 NM		FT to M 1 FT = 0.3048 M		M to FT 1 M = 3.281 FT	
NM	KM	KM	NM	FT	M	M	FT
500	926.000	500	269.98	5 000	1 524.000	5 000	16 404.20
				6 000	1 828.800		
				7 000	2 133.600		
				8 000	2 438.400		
				9 000	2 743.200		
				10 000	3 048.000		

From decimal minutes of an arc to seconds of an arc.

MIN	SEC	MIN	SEC	MIN	SEC	MIN	SEC
0.01	0.6	0.26	15.6	0.51	30.6	0.76	45.6
0.02	1.2	0.27	16.2	0.52	31.2	0.77	46.2
0.03	1.8	0.28	16.8	0.53	31.8	0.78	46.8
0.04	2.4	0.29	17.4	0.54	32.4	0.79	47.4
0.05	3.0	0.30	18.0	0.55	33.0	0.80	48.0
0.06	3.6	0.31	18.6	0.56	33.6	0.81	48.6
0.07	4.2	0.32	19.2	0.57	34.2	0.82	49.2
0.08	4.8	0.33	19.8	0.58	34.8	0.83	49.8
0.09	5.4	0.34	20.4	0.59	35.4	0.84	50.4
0.10	6.0	0.35	21.0	0.60	36.0	0.85	51.0
0.11	6.6	0.36	21.6	0.61	36.6	0.86	51.6
0.12	7.2	0.37	22.2	0.62	37.2	0.87	52.2
0.13	7.8	0.38	22.8	0.63	37.8	0.88	52.8
0.14	8.4	0.39	23.4	0.64	38.4	0.89	43.4
0.15	9.0	0.40	24.0	0.65	39.0	0.90	54.0
0.16	9.6	0.41	24.6	0.66	39.6	0.91	54.6
0.17	10.2	0.42	25.2	0.67	40.2	0.92	55.2
0.18	10.8	0.43	25.8	0.68	40.8	0.93	55.8
0.19	11.4	0.44	26.4	0.69	41.4	0.94	56.4
0.20	12.0	0.45	27.0	0.70	42.0	0.95	57.0
0.21	12.6	0.46	27.6	0.71	42.6	0.96	57.6
0.22	13.2	0.47	28.2	0.72	43.2	0.97	58.2
0.23	13.8	0.48	28.8	0.73	43.8	0.98	58.8

MIN	SEC	MIN	SEC	MIN	SEC	MIN	SEC
0.24	14.4	0.49	29.4	0.74	44.4	0.99	59.4
0.25	15.0	0.50	30.0	0.75	45.0		

From seconds of an arc to decimal minutes of an arc

SEC	MIN	SEC	MIN	SEC	MIN	SEC	MIN
1	0.02	16	0.27	31	0.52	46	0.77
2	0.03	17	0.28	32	0.53	47	0.78
3	0.05	18	0.30	33	0.55	48	0.80
4	0.07	19	0.32	34	0.57	49	0.82
5	0.08	20	0.33	35	0.58	50	0.83
6	0.10	21	0.35	36	0.60	51	0.85
7	0.12	22	0.37	37	0.62	52	0.87
8	0.13	23	0.38	38	0.63	53	0.88
9	0.15	24	0.40	39	0.65	54	0.90
10	0.17	25	0.42	40	0.67	55	0.92
11	0.18	26	0.43	41	0.68	56	0.93
12	0.20	27	0.45	42	0.70	57	0.95
13	0.22	28	0.47	43	0.72	58	0.97
14	0.24	29	0.48	44	0.73	59	0.98
15	0.25	30	0.50	45	0.75		

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## GEN 2.7 SUNRISE/SUNSET TABLES

### 1. General

1.1 The tables on the following pages have been prepared by Namibia Meteorological Services and are reproduced here with their permission.

1.2 The times given in the tables are in UTC, beginning from nautical twilight (Sun 12° below the horizon), civil twilight (Sun 6° below the horizon), sunrise, sunset, civil twilight and nautical twilight.

1.3 The tables are calculated for the year 2020, which is used as an “average year” for the years 2016 to 2025. In this period, the times on an arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the “average year”.

#### Note:

Only the tables for Hosea Kutako International Airport are listed and information on other main Airports will be available Namibia Metereological Service.

The tables given as example are for:

Hosea Kutako INTL Airport      22°28'47"S 017°28'15"E

**Sunrise-Sunset Tables for Hosea Kutako INTL Airport**

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
<b>DECEMBER</b>							<b>JANUARY</b>						
01	0304	0333	0358	1722	1747	1817	01	0315	0345	0410	1739	1804	1834
02	0304	0333	0358	1723	1748	1818	02	0315	0345	0410	1740	1805	1834
03	0304	0333	0358	1724	1749	1818	03	0316	0346	0411	1740	1805	1835
04	0304	0333	0358	1725	1749	1819	04	0317	0347	0412	1740	1805	1835
05	0304	0333	0358	1725	1750	1820	05	0317	0347	0412	1740	1805	1835
06	0304	0334	0358	1726	1751	1821	06	0318	0348	0413	1741	1805	1835
07	0304	0334	0359	1726	1751	1821	07	0319	0349	0414	1741	1806	1835
08	0304	0334	0359	1727	1752	1822	08	0320	0349	0414	1741	1806	1835
09	0304	0334	0359	1728	1753	1823	09	0320	0350	0415	1741	1806	1835
10	0304	0334	0359	1728	1753	1823	10	0321	0351	0416	1741	1806	1836
11	0305	0335	0400	1729	1754	1824	11	0322	0351	0416	1741	1806	1836
12	0305	0335	0400	1730	1755	1825	12	0323	0352	0417	1741	1806	1835
13	0305	0335	0400	1730	1755	1825	13	0324	0353	0418	1741	1806	1835
14	0305	0335	0400	1731	1756	1826	14	0324	0354	0418	1741	1806	1835
15	0306	0336	0401	1731	1757	1827	15	0325	0355	0419	1741	1806	1835
16	0306	0336	0401	1732	1757	1827	16	0326	0355	0420	1741	1806	1835
17	0306	0336	0402	1733	1758	1828	17	0327	0356	0421	1741	1806	1835
18	0307	0337	0402	1733	1758	1828	18	0328	0357	0421	1741	1806	1835
19	0307	0337	0402	1734	1759	1829	19	0329	0358	0423	1741	1805	1834
20	0308	0338	0403	1734	1759	1829	20	0329	0358	0423	1741	1805	1834
21	0308	0338	0403	1735	1800	1830	21	0330	0359	0423	1741	1805	1834
22	0309	0339	0404	1735	1800	1830	22	0331	0400	0424	1741	1805	1834
23	0309	0339	0404	1736	1801	1831	23	0332	0401	0425	1741	1805	1834
24	0310	0340	0405	1736	1801	1831	24	0333	0401	0426	1740	1805	1833
25	0310	0340	0405	1737	1802	1832	25	0333	0402	0426	1740	1804	1833
26	0311	0341	0406	1737	1802	1832	26	0334	0403	0427	1740	1804	1833
27	0311	0341	0407	1737	1803	1833	27	0335	0404	0428	1740	1804	1832
28	0312	0342	0407	1738	1803	1833	28	0336	0404	0428	1739	1803	1832

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
29	0313	0343	0408	1738	1803	1833	29	0337	0405	0429	1739	1803	1831
30	0313	0343	0408	1739	1804	1834	30	0337	0406	0430	1739	1803	1831
31	0314	0344	0409	1739	1804	1834	31	0338	0407	0430	1738	1802	1830
<b>FEBRUARY</b>							<b>MARCH</b>						
01	0339	0407	0431	1738	1802	1830	01	0358	0425	0447	1719	1742	1808
02	0340	0408	0432	1738	1801	1829	02	0359	0425	0448	1718	1741	1807
03	0341	0409	0432	1737	1801	1829	03	0359	0426	0448	1717	1740	1806
04	0341	0409	0433	1737	1800	1828	04	0400	0426	0449	1717	1739	1806
05	0342	0410	0434	1736	1800	1828	05	0400	0427	0449	1716	1738	1805
06	0343	0411	0434	1736	1759	1827	06	0401	0427	0450	1715	1737	1804
07	0344	0411	0435	1735	1758	1826	07	0401	0427	0450	1714	1736	1803
08	0344	0412	0436	1735	1758	1825	08	0402	0428	0450	1713	1735	1802
09	0345	0413	0436	1734	1758	1825	09	0402	0428	0451	1712	1735	1801
10	0346	0413	0437	1734	1757	1825	10	0402	0429	0451	1711	1734	1800
11	0346	0414	0437	1733	1756	1824	11	0403	0429	0452	1710	1733	1759
12	0347	0415	0438	1732	1756	1823	12	0403	0430	0452	1709	1732	1758
13	0348	0415	0439	1732	1755	1822	13	0404	0430	0452	1708	1731	1757
14	0349	0416	0439	1731	1754	1822	14	0404	0430	0453	1707	1730	1756
15	0349	0417	0440	1731	1754	1821	15	0405	0431	0453	1706	1729	1755
16	0350	0417	0440	1730	1753	1820	16	0405	0431	0454	1706	1728	1754
17	0351	0418	0441	1729	1752	1819	17	0405	0432	0454	1705	1727	1753
18	0351	0418	0441	1728	1752	1819	18	0406	0432	0454	1704	1726	1752
19	0352	0419	0442	1728	1751	1818	19	0406	0432	0455	1703	1725	1751
20	0352	0420	0443	1727	1750	1817	20	0407	0433	0455	1702	1724	1750
21	0353	0420	0443	1726	1749	1816	21	0407	0433	0455	1701	1723	1749
22	0354	0421	0444	1726	1748	1815	22	0407	0433	0456	1700	1722	1748
23	0354	0421	0444	1725	1748	1815	23	0408	0434	0456	1659	1721	1747
24	0355	0422	0445	1724	1747	1814	24	0408	0434	0456	1658	1720	1746
25	0355	0422	0445	1723	1746	1813	25	0408	0434	0457	1657	1719	1745
26	0356	0423	0446	1722	1745	1812	26	0409	0435	0457	1656	1718	1744
27	0357	0423	0446	1722	1744	1811	27	0409	0435	0458	1655	1717	1743

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
28	0357	0424	0447	1721	1743	1810	28	0409	0435	0458	1654	1716	1742
29	0358	0424	0447	1720	1743	1809	29	0410	0436	0458	1653	1716	1742
							30	0410	0436	0459	1652	1715	1741
							31	0410	0437	0459	1651	1714	1740
<b>APRIL</b>							<b>MAY</b>						
01	0411	0437	0459	1651	1713	1739	01	0420	0447	0510	1626	1649	1716
02	0411	0437	0459	1650	1712	1738	02	0421	0447	0511	1625	1648	1715
03	0411	0437	0500	1649	1712	1738	03	0421	0448	0511	1625	1648	1715
04	0412	0438	0500	1648	1711	1737	04	0421	0448	0511	1624	1647	1714
05	0412	0438	0500	1647	1710	1736	05	0422	0449	0512	1623	1647	1714
06	0412	0438	0501	1646	1709	1735	06	0422	0449	0512	1623	1646	1713
07	0413	0439	0501	1645	1709	1734	07	0423	0449	0513	1622	1646	1713
08	0413	0439	0501	1645	1707	1733	08	0423	0450	0513	1622	1645	1712
09	0413	0439	0502	1644	1706	1732	09	0423	0450	0514	1621	1645	1712
10	0414	0440	0502	1643	1705	1731	10	0424	0451	0514	1621	1644	1711
11	0414	0440	0503	1642	1704	1731	11	0424	0451	0515	1620	1644	1711
12	0414	0440	0503	1641	1704	1730	12	0424	0451	0515	1620	1643	1710
13	0414	0441	0503	1640	1703	1729	13	0425	0452	0515	1619	1643	1710
14	0415	0441	0504	1639	1702	1728	14	0425	0452	0516	1619	1642	1710
15	0415	0441	0504	1638	1701	1727	15	0425	0453	0516	1618	1642	1709
16	0415	. The	0504	1638	1700	1726	16	0426	0453	0517	1618	1642	1709
17	0416	0442	0505	1637	1659	1726	17	0426	0453	0517	1618	1641	1709
18	0416	0442	0505	1636	1659	1725	18	0427	0454	0518	1617	1641	1708
19	0416	0443	0505	1635	1658	1724	19	0427	0454	0518	1617	1641	1708
20	0417	0443	0506	1634	1657	1723	20	0427	0455	0519	1617	1640	1708
21	0417	0443	0506	1633	1656	1723	21	0428	0455	0519	1616	1640	1707
22	0417	0444	0507	1633	1656	1722	22	0428	0455	0519	1616	1640	1707
23	0418	0444	0507	1632	1655	1721	23	0428	0456	0520	1616	1640	1707
24	0418	0444	0507	1631	1654	1720	24	0429	0456	0520	1615	1639	1707
25	0418	0445	0508	1630	1653	1720	25	0429	0457	0521	1615	1639	1707
26	0419	0445	0508	1630	1653	1719	26	0430	0457	0521	1615	1639	1707

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
27	0419	0446	0509	1629	1652	1718	27	0430	0458	0522	1615	1639	1706
28	0419	0446	0509	1628	1651	1718	28	0430	0458	0522	1615	1639	1706
29	0420	0446	0509	1628	1651	1717	29	0431	0458	0522	1614	1639	1706
30	0420	0447	0510	1627	1650	1717	30	0431	0459	0523	1614	1638	1706
							31	0431	0459	0523	1614	1638	1706
<b>JUNE</b>							<b>JULY</b>						
01	0432	0500	0524	1614	1638	1706	01	0440	0508	0532	1618	1643	1711
02	0432	0500	0524	1614	1638	1706	02	0440	0508	0532	1619	1643	1711
03	0433	0501	0525	1614	1638	1706	03	0440	0508	0532	1619	1643	1711
04	0433	0501	0525	1614	1638	1706	04	0440	0508	0532	1619	1644	1712
05	0433	0501	0526	1614	1638	1706	05	0440	0508	0532	1620	1644	1712
06	0434	0502	0526	1614	1638	1706	06	0440	0508	0532	1620	1645	1712
07	0434	0502	0526	1614	1638	1706	07	0440	0508	0532	1621	1645	1713
08	0434	0502	0527	1614	1638	1706	08	0440	0508	0532	1621	1645	1713
09	0435	0503	0527	1614	1638	1706	09	0440	0507	0532	1621	1646	1713
10	0435	0503	0527	1614	1638	1706	10	0440	0507	0532	1622	1646	1714
11	0435	0503	0528	1614	1638	1706	11	0440	0507	0532	1622	1646	1714
12	0436	0504	0528	1614	1639	1706	12	0440	0507	0531	1622	1647	1714
13	0436	0504	0528	1614	1639	1707	13	0439	0507	0531	1623	1647	1715
14	0436	0504	0529	1614	1639	1707	14	0439	0507	0531	1623	1647	1715
15	0437	0505	0529	1614	1639	1707	15	0439	0507	0531	1624	1648	1715
16	0437	0505	0529	1615	1639	1707	16	0439	0507	0531	1624	1648	1716
17	0437	0505	0530	1615	1639	1707	17	0439	0506	0530	1624	1649	1716
18	0437	0505	0530	1615	1639	1707	18	0439	0506	0530	1625	1649	1716
19	0438	0506	0530	1615	1640	1708	19	0438	0506	0530	1625	1649	1717
20	0438	0506	0530	1615	1640	1708	20	0438	0506	0530	1626	1650	1717
21	0438	0506	0531	1616	1640	1708	21	0438	0505	0529	1626	1650	1717
22	0438	0506	0531	1616	1640	1708	22	0438	0505	0529	1627	1650	1718
23	0439	0506	0531	1616	1641	1709	23	0437	0505	0529	1627	1651	1718
24	0439	0507	0531	1616	1641	1709	24	0437	0504	0528	1627	1651	1719
25	0439	0507	0531	1617	1641	1709	25	0437	0504	0528	1628	1652	1719

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
26	0439	0507	0531	1617	1641	1709	26	0436	0504	0527	1628	1652	1719
27	0439	0507	0532	1617	1642	1710	27	0436	0503	0527	1629	1652	1720
28	0439	0507	0532	1617	1642	1710	28	0436	0503	0527	1629	1653	1720
29	0439	0507	0532	1618	1642	1710	29	0435	0502	0526	1629	1653	1720
30	0440	0507	0532	1618	1643	1710	30	0435	0502	0526	1630	1653	1721
							31	0434	0502	0525	1630	1654	1721
<b>AUGUST</b>							<b>SEPTEMBER</b>						
1	0434	0501	0525	1631	1654	1721	01	0412	0439	0501	1641	1704	1730
2	0434	0501	0524	1631	1655	1721	02	0412	0438	0500	1642	1704	1730
3	0433	0500	0523	1631	1655	1722	03	0411	0437	0459	1642	1704	1730
4	0433	0459	0523	1632	1655	1722	04	0410	0436	0458	1642	1705	1731
5	0432	0459	0522	1632	1656	1722	05	0409	0435	0457	1642	1705	1731
6	0432	0458	0522	1633	1656	1723	06	0408	0434	0456	1643	1705	1731
7	0431	0458	0521	1633	1656	1723	07	0407	0433	0455	1643	1706	1732
8	0430	0457	0520	1633	1657	1723	08	0406	0432	0454	1643	1706	1732
9	0430	0457	0520	1634	1657	1724	09	0405	0431	0453	1644	1706	1732
10	0429	0456	0519	1634	1657	1724	10	0404	0430	0452	1644	1706	1732
11	0429	0455	0518	1634	1658	1724	11	0403	0429	0451	1644	1707	1733
12	0428	0455	0518	1635	1658	1725	12	0402	0428	0450	1644	1707	1733
13	0427	0454	0517	1635	1658	1725	13	0401	0427	0449	1645	1707	1733
14	0427	0453	0516	1636	1659	1725	14	0400	0426	0448	1645	1707	1733
15	0426	0452	0516	1636	1659	1725	15	0359	0425	0447	1645	1708	1734
16	0425	0452	0515	1636	1659	1726	16	0358	0424	0446	1646	1708	1734
17	0425	0451	0514	1637	1700	1726	17	0357	0423	0445	1646	1708	1734
18	0424	0450	0513	1637	1700	1726	18	0356	0422	0444	1646	1709	1735
19	0423	0450	0512	1637	1700	1727	19	0355	0421	0443	1646	1709	1735
20	0422	0449	0512	1638	1700	1727	20	0354	0420	0442	1647	1709	1735
21	0422	0448	0511	1638	1701	1727	21	0353	0419	0441	1647	1709	1735
22	0421	0447	0510	1638	1701	1727	22	0352	0418	0440	1647	1710	1736
23	0420	0446	0509	1639	1701	1728	23	0351	0417	0439	1648	1710	1736
24	0419	0446	0508	1639	1702	1728	24	0350	0416	0438	1648	1710	1736

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
25	0418	0445	0507	1639	1702	1728	25	0349	0415	0437	1648	1711	1737
26	0418	0444	0507	1639	1702	1728	26	0348	0414	0436	1649	1711	1737
27	0417	0443	0506	1640	1702	1729	27	0347	0413	0436	1649	1711	1737
28	0416	0442	0505	1640	1703	1729	28	0346	0412	0435	1649	1712	1738
29	0415	0441	0504	1640	1703	1729	29	0345	0411	0434	1649	1712	1738
30	0414	0440	0503	1641	1703	1729	30	0344	0410	0433	1650	1712	1738
31	0413	0439	0502	1641	1704	1730							
<b>OCTOBER</b>							<b>NOVEMBER</b>						
01	0343	0409	0432	1650	1713	1739	01	0315	0343	0406	1704	1727	1755
02	0342	0408	0431	1650	1713	1739	02	0314	0342	0406	1704	1728	1755
03	0341	0407	0430	1651	1713	1740	03	0314	0342	0405	1705	1728	1756
04	0340	0406	0429	1651	1714	1740	04	0313	0341	0404	1705	1729	1757
05	0339	0405	0428	1651	1714	1740	05	0312	0340	0404	1706	1730	1757
06	0338	0404	0427	1652	1714	1741	06	0312	0340	0403	1706	1730	1758
07	0337	0403	0426	1652	1715	1741	07	0311	0339	0403	1707	1731	1759
08	0336	0402	0425	1653	1715	1742	08	0311	0339	0402	1708	1731	1800
09	0335	0401	0424	1653	1716	1742	09	0310	0338	0402	1708	1732	1800
10	0334	0400	0423	1653	1716	1743	10	0310	0338	0402	1709	1733	1801
11	0333	0400	0422	1654	1716	1743	11	0309	0337	0401	1710	1733	1802
12	0332	0359	0421	1654	1717	1743	12	0308	0337	0401	1710	1734	1803
13	0331	0358	0420	1654	1717	1744	13	0308	0336	0400	1711	1735	1803
14	0330	0357	0420	1655	1718	1744	14	0308	0336	0400	1711	1736	1804
15	0329	0356	0419	1655	1718	1745	15	0307	0336	0400	1712	1736	1805
16	0328	0355	0418	1656	1719	1745	16	0307	0335	0359	1713	1737	1806
17	0327	0354	0417	1656	1719	1746	17	0306	0335	0359	1713	1738	1806
18	0326	0353	0416	1657	1720	1746	18	0306	0335	0359	1714	1738	1807
19	0326	0352	0415	1657	1720	1747	19	0306	0334	0359	1715	1739	1808
20	0325	0352	0415	1658	1720	1747	20	0305	0334	0359	1715	1740	1809
21	0324	0351	0414	1658	1721	1748	21	0305	0334	0358	1716	1741	1810
22	0323	0350	0413	1658	1721	1749	22	0305	0334	0358	1717	1741	1810
23	0322	0349	0412	1659	1722	1749	23	0305	0334	0358	1718	1742	1811

Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)							Hosea Kutako INTL Airport (FYWH), 222847S 0172815E (All times UTC)						
Twilight			Twilight				Twilight			Twilight			
Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical	Date	Nau- tical	Civil	Sun- rise	Sun- set	Civil	Nau- tical
24	0321	0348	0412	1659	1723	1750	24	0304	0333	0358	1718	1743	1812
25	0320	0348	0411	1700	1723	1750	25	0304	0333	0358	1719	1743	1813
26	0320	0347	0410	1700	1724	1751	26	0304	0333	0358	1720	1744	1813
27	0319	0346	0409	1701	1724	1752	27	0304	0333	0358	1720	1745	1814
28	0318	0345	0409	1701	1725	1752	28	0304	0333	0358	1721	1746	1815
29	0317	0345	0408	1702	1725	1753	29	0304	0333	0358	1722	1746	1816
30	0317	0344	0407	1702	1726	1753	30	0304	0333	0358	1722	1747	1817
31	0316	0343	0407	1703	1726	1754							

## GEN 3. SERVICES

### GEN 3.1 AERONAUTICAL INFORMATION SERVICES

#### 1. Responsible service

1.1 The Aeronautical Information Service, which forms part of the Namibia Civil Aviation Authority, ensures the flow of information necessary for the safety, regularity and efficiency of international and national air navigation within the areas of its responsibility as indicated under GEN 3.1 paragraph 1.2 below. It consists of the AIS and an International NOTAM Office (NOF).

SAT: 0400 – 1800  
SUN: 0500 - 1800

Outside AIS hours of operation and in case of emergency, AIS officer on standby to issue NOTAM.

1.2 **AIS**  
Aeronautical Information Services  
Namibia Civil Aviation Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek

Tel: +264 61 702080/3/9  
Fax: +264 61 702088  
Fax to Email: +264 88 6561134  
E-mail: aisc@dca.com.na  
AFS: FYWEZPZX

The service is provided in accordance with the provisions contained in ICAO Annex 15 - Aeronautical Information Services. The hours of duty of the AIS are as follows:

MON – FRI: 0400 - 1900  
SAT: 0400 - 1800  
SUN: 0500 - 1800

1.3 International NOTAM office (NOF)  
International NOTAM Office  
Namibia Civil Aviation Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek  
TEL: +26461702080/1/3/9  
Fax: +26461702088  
AFS: FYWFYNYX  
E-mail: aisc@dca.com.na  
Hours of Operations:  
MON-FRI: 0400 - 1900

#### 2. Area of responsibility

The Aeronautical Information Service is responsible for the collection and dissemination of information for the entire territory of Namibia and for the airspace over the high seas encompassed by the Windhoek Flight Information Region (FIR).

#### 3. Aeronautical publications

##### 3.1 Aeronautical Information

The aeronautical information is provided in the form of an Aeronautical Information Products on request, consisting of the following elements:

- a) Aeronautical Information Publication (AIP).
- b) Amendment service to the AIP (AIP AMDT).
- c) Supplement to the AIP (AIP SUP).
- d) NOTAM, SNOWTAM and Pre-flight Information Bulletins (PIB).
- e) Aeronautical Information Circulars (AIC).
- f) Checklist and list of valid NOTAM.

NOTAM and the related monthly checklists are issued via the Aeronautical Fixed Service (AFS), while PIB are made available at aerodrome AIS units. All other elements of the package are distributed by air mail and electronic mail.

##### 3.2 Aeronautical Information Publication (AIP)

3.2.1 The AIP is the basic aviation document needed primarily to satisfy international requirements for the exchange of permanent aeronautical

information and long duration changes essential for air navigation.

3.2.2 The Namibian AIP is published in two (2) volumes.

3.2.3 The AIP is published in loose-leaf form, in English only, for use in international and domestic operations, whether the flight is a commercial or private one.

3.2.4 The AIP purchase price will be published in AIC's.

### 3.3 Amendment service to the AIP (AIP AMDT)

3.3.1 Amendments to the AIP are made by means of replacement sheets.

AIRAC AIP Amendment (AIRAC AIP AMDT), issued in accordance with the AIRAC system and identified by a pink cover sheet and the acronym - AIRAC, incorporates operationally significant permanent changes into the AIP on the indicated AIRAC effective date.

3.3.2 A brief description of the subjects affected by the amendment is given on the AIP Amendment cover sheet. New information included on the reprinted AIP pages is annotated or identified by a vertical line in the left margin (or immediately to the left) of the change/addition.

3.3.3 Each AIP and each AIP replacement page introduced by an amendment, including the amendment cover sheet, are dated. The date consists of the day, month (by name) and year of the publication date (regular AIP AMDT) or the AIRAC effective date (AIRAC AIP AMDT) of the information. Each AIP amendment cover sheet includes references to the serial number of those elements, if any, of the Integrated Aeronautical Information Package which have been incorporated in the AIP by the amendment and are consequently cancelled.

3.3.4 Each AIRAC AIP AMDT is allocated separate serial numbers which are consecutive and based on the calendar year. The year (indicated by four digits) is a part of the serial number of the amendment, e.g. AIRAC A01/1996.

3.3.5 A checklist of AIP pages containing page number/chart title and the publication or effective date (day, month by name and year) of the

information is re-issued with each amendment and is an integral part of the AIP.

### 3.4 Supplement to the AIP (AIP SUP)

3.4.1 Temporary changes of long duration (three months and longer) and information of short duration which consist of extensive text and/or graphics, supplementing the permanent information contained in the AIP, are published as AIP Supplements (AIP SUP). Operationally significant temporary changes to the AIP are published in accordance with the AIRAC system and its established effective dates and are identified clearly by the acronym AIRAC AIP SUP.

AIP Supplements are separated by information subject (General - GEN, En-route - ENR and Aerodromes - AD). Each AIP Supplement (AIRAC) is allocated a serial number which is consecutive and based on the calendar year, i.e. AIRAC AIP SUP S01/1996.

3.4.2 An AIP Supplement is only distributed in an electronic format and kept on the NCAA website while valid. The period of validity of the information contained in the AIP Supplement will normally be given in the supplement itself. Alternatively, NOTAM may be used to indicate changes to the period of validity or cancellation of the supplement.

3.4.3 The checklist of AIP Supplements currently in force is issued in the monthly printed plain-language summary of NOTAM in force.

### 3.5 NOTAM and Pre-flight Information Bulletins (PIB)

3.5.1 NOTAM contain information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential for personnel concerned with flight operations. The text of each NOTAM contains the information in the order shown in the ICAO NOTAM Format and composed of the significations/uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language. NOTAM are originated and issued for Windhoek FIR and are distributed in four series identified by the letters A, B, C and S.

- a) **Series A:** NOTAM containing information of concern to long or medium range flights and given selected international distribution;
- b) **Series B.** NOTAM containing full information on all aerodrome/ heliports, facilities and procedures available for use in international civil aviation and given international distribution to adjacent state only;
- c) **Series C.** NOTAM containing information of all concern to aircraft other than those engaged in international civil aviation and given national distribution only;
- d) **Series S.** Information concerning snow, slush, ice or standing water associated with snow, slush and ice in the movement areas.

3.5.2 Pre-flight Information Bulletins (PIB), which contains a recapitulation of current NOTAM and other information of urgent character for the operator/flight crews, are available at the aerodrome AIS units. The extent of the information contained in the PIB is indicated under paragraph 5 of this subsection.

### 3.6 ***Aeronautical Information Circulars (AIC)***

3.6.1 An AIC is a notice containing information that does not qualify for the origination of a NOTAM, AIP SUP, AIP AMD or for inclusion into the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

3.6.2 An AIC shall be issued whenever it is necessary to promulgate the following:

- a) A long-term forecast of any major change in legislation, regulations, procedures or facilities.
- b) Information of a purely explanatory or advisory nature liable to affect flight safety.
- c) Information or notification of an explanatory or advisory nature concerning technical, legislative or administrative matters.

3.6.3 AIC should be colour coded by subject where there are sufficient circulars in force to warrant such identification, e.g.

- a) white – administrative;
- b) yellow – air traffic control (ATC);

- c) pink – safety;
- d) mauve – danger area map; and
- e) green – maps/charts.

3.6.4 The date of issue will appear on each AIC, and when a AIC is re-issued or amended, the number will remain the same but the date of issue will be changed.

3.6.5 A checklist of AIC currently in force shall be issued twice a year.

### 3.7 ***Checklist and list of valid NOTAM***

A checklist of valid NOTAM is issued monthly via AFS. The checklist is followed by a printed list of valid NOTAM distributed by mail to all recipients of the Integrated Aeronautical Information Package. It contains a plain language (English) presentation of the valid NOTAM and information about the number of the latest issue, AIRAC AIP AMDT, AIRAC AIP SUP and AIC as well as the numbers of the elements issued under the AIRAC that will become effective.

### 3.8 ***Sale of publications***

The said publications can be obtained from the Aeronautical Information Service. Purchase prices are published in the AIC.

## 4. **AIRAC system**

4.1 In order to control and regulate the operationally/significant changes requiring amendments to charts route manuals, etc., such changes, whenever possible, will be issued on pre-determined dates according to the AIRAC system. This type of information will be published as an AIRAC AIP AMDT or an AIRAC AIP SUP. If an AIRAC AIP AMDT or SUP cannot be produced due to lack of time, NOTAM clearly marked AIRAC will be issued. Such NOTAM will immediately be followed by an AMDT or SUP.

4.2 The table below indicates AIRAC effective dates for the coming years. AIRAC information will be issued so that the information will be received by the user, not later than 28 days, and for major changes not later than 56 days before the effective date. At AIRAC effective date, a trigger NOTAM will be issued giving a brief description of i.e. contents, effective date and reference number of the AIRAC

AIP AMDT or AIRAC AIP SUP that will become effective on that date. Trigger NOTAM will remain in force as a reminder in the PIB until the new checklist/summary is issued.

will be issued by NOTAM not later than one AIRAC cycle before the AIRAC effective date concerned.

4.3 If no information was submitted for publication, at the AIRAC date, a NIL notification

#### Schedule of AIRAC effective dates: 2018 – 2024

2018	2019	2020	2021	2022	2023	2024
04 January	03 January	02 January	28 January	27 January	26 January	25 January
01 February	31 January	30 January	25 February	24 February	23 February	22 February
01 March	28 February	27 February	25 March	24 March	23 March	21 March
29 March	28 March	26 March	22 April	21 April	20 April	18 April
26 April	25 April	23 April	20 May	19 May	18 May	16 May
24 May	23 May	21 May	17 June	16 June	15 June	13 June
21 June	20 June	18 June	15 July	14 July	13 July	11 July
19 July	18 July	16 July	12 August	11 August	10 August	08 August
16 August	15 August	13 August	09 September	08 September	07 September	05 September
13 September	12 September	10 September	07 October	06 October	05 October	03 October
11 October	10 October	08 October	04 November	03 November	02 November	31 October
08 November	07 November	05 November	02 December	01 December	30 November	28 November
06 December	05 December	03 December	30 December	29 December	28 December	26 December
		31 December				

#### 5. Pre-flight information service at airports/heliports

Pre-flight information is available at Airports /Aerodromes as detailed below:

- a) Eros Airport: NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC
- b) Katima Mulilo Aerodrome: NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC
- c) Luderitz Aerodrome: NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC
- d) Ondangwa Aerodrome: NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC
- e) Walvis Bay Airport: NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC

- f) Hosea Kutako International Airport (Windhoek): NOTAM, SNOWTAM, NOTAM Summary, NOTAM Checklist, AIP, AIP Supplement and AIC

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## GEN 3.2 AERONAUTICAL CHARTS

### 1. Responsible service

1.1 The Republic of South Africa produces a range of aeronautical charts which are available for use by all types of civil aviation. The charts are compiled by the Department of Regional and Land Affairs, Chief Directorate: Surveys and Land Information and printed by the Government Printer, Pretoria.

#### 1.2 *Applicable ICAO documents*

1.2.1 The standards contained in Annex 4 are applied.

1.2.2 The recommended practices, procedures and guidance material contained in the following ICAO documents are applied where considered necessary:

- a) Annex 4, Aeronautical charts.
- b) DOC 8168-OPS/611, Aircraft Operations.
- c) DOC 8697-AN/889, Aeronautical Chart Manual.

#### 1.3 *Differences from ICAO Regulatory Material*

Nil.

### 2. Maintenance of charts

2.1 The aeronautical charts included in the AIP are regularly kept up-to-date or are replaced by the amendments to the AIP. Except for the aeronautical charts included in the AIP no direct amendment service is provided. Significant amendments or revisions in aeronautical information to other aeronautical chart series are promulgated in NOTAM. Information concerning new maps and charts will be notified by Aeronautical Information Circular or NOTAM as appropriate.

2.2 Items of information found after publication to have been incorrect at the aeronautical information date, are corrected immediately by NOTAM if they are of operational significance, attention being directed to the particular chart affected.

2.3 Revision of the aeronautical information on all charts is constantly in progress and amended re-

prints are published as regularly as production resources permit. Topographical and hydrographical information portrayed is also revised when necessary.

### 3. Purchase arrangements

3.1 The following charts are available (from the RSA) either flat or folded to ICAO specifications, from:

- a) The Government Printer  
Publications Section  
Private Bag X85  
Pretoria  
0001
- b) The Chief Directorate: Surveys and Mapping  
Private Bag X10  
Mowbray  
7705
- c) The Surveyor General  
Private Bag X20634  
Bloemfontein  
9300
- d) The Surveyor General  
PO Box 396  
Pietermaritzburg  
3200

**Note:** Only a limited number of local 1: 500 000 and 1: 1 000 000 aeronautical charts are available from the offices of the Surveyor General in Bloemfontein and Pietermaritzburg.

- (1) World Aeronautical Chart ICAO 1:1 000 000
- (2) SA Topo 1: 500 000 (Aeronautical).

3.2 The prices of charts are published in AIC's.

3.3 Approach and Landing Charts and Aerodrome Obstruction Charts are contained in AD 2.24 for Keetmanshoop (FYKT), Walvis Bay (FYWB) and Hosea Kutako International (FYWH).

### 4. Aeronautical chart series available

4.1 The following type of charts are published:

- a) Navigation charts at 1:1 000 000.

- b) Navigation charts at 1: 500 000.
- c) Instrument approach and landing charts.

information shown on these charts is in accordance with that recommended by ICAO. This series is intended for general purposes as well as for use in the air, especially for navigation and pilotage over relatively short distances.

#### 4.2 General description of each series

##### 4.2.1 Navigation charts at 1:1 000 000

These charts constitute the contribution made by the Republic of South Africa to the World Aeronautical Chart, ICAO 1:1 000 000 series. Designated for pre-flight planning as well as pilotage, these charts are constructed on Lambert's conical orthomorphic projection and conform to the ICAO specifications.

##### 4.2.3 Approach and landing charts

Approach and landing charts conforming to the specifications of Annex 4 are available for all aerodromes open to international civil aviation and for all domestic aerodromes where instrument approach procedures have been established. The approach and landing charts are printed back to back. Separate charts are available for each procedure established for the aerodrome.

##### 4.2.2 Navigation charts at 1: 500 000

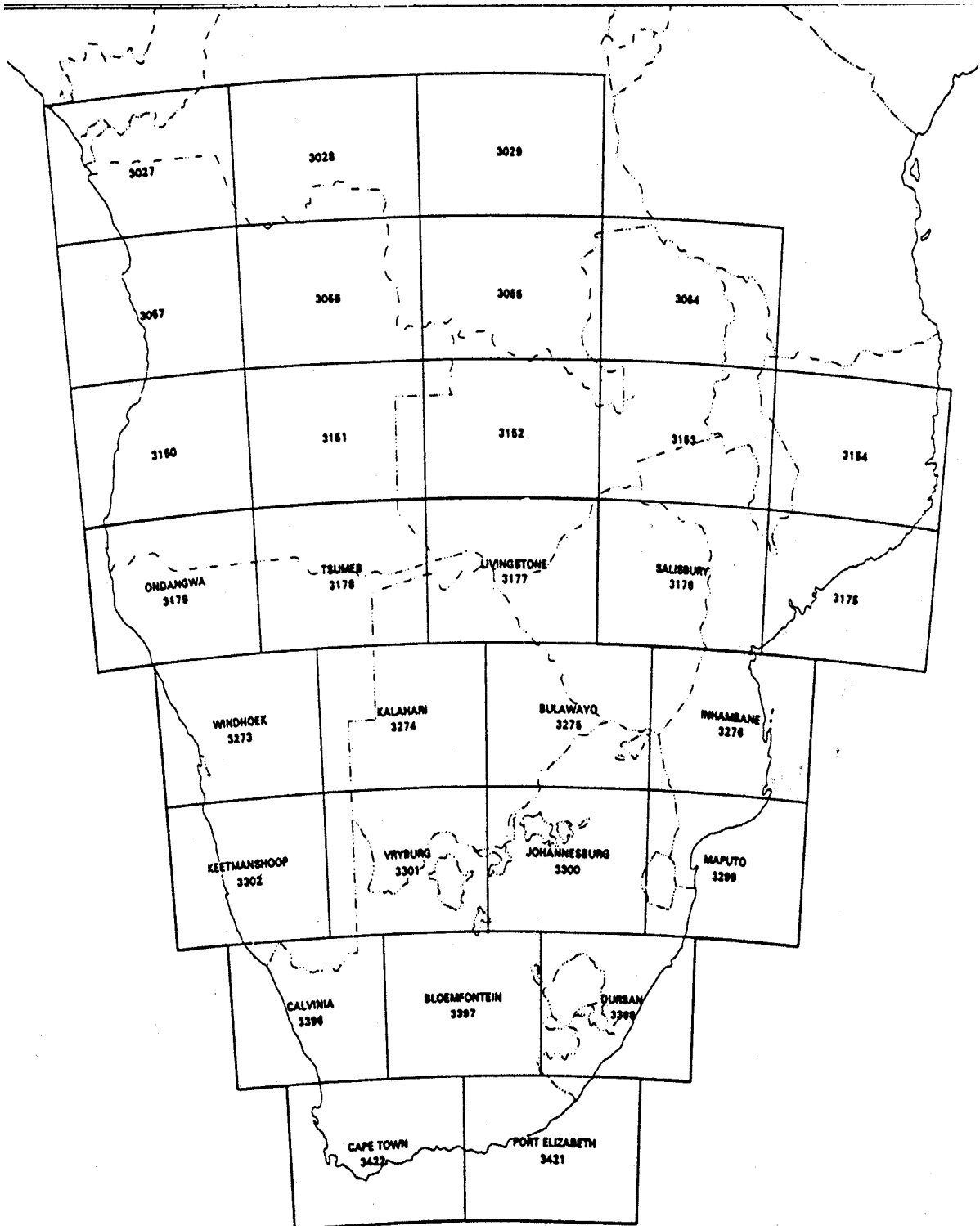
This series is constructed on Lambert's conical orthomorphic projection and the aeronautical

### 5. List of aeronautical charts available

Title of Series and Scale	Series Number	Chart Name and/or Number	Price per Sheet. VAT excl	Date of Aeronautical Information	Date of Topographical Base
1	2	3	4	5	6
World Aeronautical Chart - ICAO 1:1 000 000	WAC	Keetmanshoop (3302)	R15.00	Jan 2000	1992
		Ondangawa (3179)	R15.00	Jul 2001	1977
		Tsumeb (3178)	R15.00	Jan 1999	1975
		Windhoek (3273)	R15.00	Oct 2002	1992
SA 1:500 000 Topographical Aeronautical Edition		Gobabis (2118)	R15.00	Feb 2000	1985
		Grootfontien (1918)	R15.00	May 1996	1985
		Katima Mulilo (1722)	R15.00	Oct 1995	1982
		Keetmanshoop (2518)	R15.00	Jan 2002	1981
		Luderitz (2514)	R15.00	Jan 2003	1978
		Ondangwa (1714)	R15.00	June 1996	1981
		Opuwo (1711)	R15.00	Feb 2000	1985
		Otjiwarongo (1914)	R15.00	Feb 2000	1986
		Rehoboth (2314)	R15.00	Oct 1998	1977
		Rundu (1718)	R15.00	Oct 1996	1981
		Windhoek (2113)	R15.00	Oct 1999	1984

Title of Series and Scale	Series Number	Chart Name and/or Number	Price per Sheet. VAT excl	Date of Aeronautical Information	Date of Topographic Base
1	2	3	4	5	6
Obstruction Chart - ICAO Type A					
Instrument Approach and Landing Chart - ICAO	IAL	<u>Keetmanshoop</u> AD VOR/DME 04  <u>Walvis Bay</u> AD VOR/DME 09 VOR/DME 27  <u>Eros</u> <u>AD</u>  <u>Hosea Kutako International</u> AD ILS 26 VOR/DME 26		See AIP Supplements	

6. Index to the World Aeronautical Chart (WAC) - ICAO 1:1 000 000



## 7. Topographical charts

7.1 The 1:000 000 and 1:500 000 series topographical charts are listed paragraph 5 above.

7.2 To supplement these charts there are also 1: 250 000, 1:100 000 and 1: 50 000 series covering the whole of Namibia. These charts can be obtained from:

Office of the Surveyor-General  
Robert Mugabe Avenue 47  
Private Bag 13182  
Windhoek

Tel: +264 61 245 055/6/7/8/9  
Fax: +264 61 22 7312

7.3 All these charts are available from: Refer to GEN 3.2 paragraph 3.1.

## 8. Corrections to charts not contained in the AIP

Nil corrections.

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## GEN 3.3 AIR TRAFFIC SERVICES

### 1. Responsible service

The Air Navigation Services Department of Namibia Civil Aviation Authority is the responsible authority for the provision of air traffic services within the area indicated under paragraph 2 below.

Senior Manager: Air Traffic Services  
Namibia Civil Aviation Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek

Telephone: +264 61 702217  
Cell: +264 81 1277425  
Telefax: +264 61 702099  
AFS: FYHQYACL  
Email: sm-atm@ncaa.na

- 1.1 The services are provided in accordance with the provisions contained in the following ICAO documents:
- Annex 2 - Rules of the air.
  - Annex 11 - Air traffic services
  - Doc 4444 - Procedures for air navigation services - Air Traffic Management (PANS-ATM).
  - Doc 8168 - Procedures for air navigation services - Aircraft operations (PANS-OPS).
  - Doc 7030 - Regional supplementary procedures.
- 1.2 Differences to these provisions are detailed in GEN 1.7.

### 2. Area of responsibility

- 2.1 Air traffic services are provided for the entire territory of Namibia including its territorial waters as well as the airspace over the high seas within the Windhoek FIR.
- 2.2 In some cases, in accordance with the regional air navigation agreement, air traffic services are provided, under the delegated authority, in the

airspace within another bordering FIR. Details of such services are provided in section ENR 2.

### 3. Types of service

- 3.1 The following types of services are provided:
- Aerodrome Control Service
  - Approach Control Service
  - Area Control Service
  - Flight Information Service (FIS)
  - Alerting Service (ALRS)
- 3.2 With the exception of services provided at military air bases, the following types of services are provided at aerodromes:
- Aerodrome Control (TWR).
  - Aerodrome Flight Information Service (AFIS); and
  - Automatic Terminal Information Service (ATIS), at certain aerodromes.
- 3.3 With exception to Zambezi Zipfel, oceanic and all the areas below TMA's, the following has been established:
- 3.3.1 The flight information centre providing flight information service.
- HRS of operation : 0500z to 1700z
  - Frequency :  
129.6 MHz North and 123.8 MHz South
  - Callsign : Windhoek information  
(from 1500ft/FL145)

### 4. Co-ordination between the operator and ATS

Co-ordination between the operator and air traffic services is effected in accordance with 2.15 of ICAO Annex 11).

## 5. Minimum flight altitude

5.1 The minimum flight altitudes on the ATS routes, as presented in section ENR 3, have been determined so as to ensure at least 300 M vertical clearance above the highest obstacle within 4 KM on each side of the centre line of the route.

5.2 However, where the angular divergence of the navigational air signal, in combination with the distance between the navigation aids, could result in an aircraft being more than 8 KM on either side of the centre line, the 18 KM protection limit is increased by the extent to which the divergence is more than 8 KM from the centre line.

## 6. ATS units address list

<i>Unit name</i>	<i>Postal address</i>	<i>Telephone NR</i>	<i>Telefax NR</i>	<i>Telex NR</i>	<i>AFS address</i>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Eros TWR	Private Bag 12003 Windhoek	+264 61 702090/1	+264 61 702099	N/A	FYWEZTZX
Katima TWR	NIL	+264 66 250202	NIL	N/A	FYKMZTZX
Luderitz TWR	NIL	+264 63 703590/1 +264 63 202228	+264 63 703599	N/A	FYLZZTZX
Ondangwa TWR	NIL	+264 65 703190	+264 65 703199	N/A	FYOAZTZX
Walvis Bay TWR	P O Box 2307 Walvis Bay	+264 64 702690/1	+264 64 702699	N/A	FYWBZTZX
Windhoek TWR	P O Box 1 Hosea Kutako Airport Namibia	+264 62 702490/3	+264 62 702499	N/A	FYWHZTZX
Windhoek APP Windhoek ACC Windhoek FIS	Private Bag 12003 Windhoek	+264 61 702290	NIL	N/A	FYWHZAZX FYWFFDPO FYWFFDPO

## GEN 3.4 COMMUNICATION SERVICES

### 1. Responsible service

1.1 The responsible service for the provision of telecommunication and navigation facility services in Namibia is the Namibia Civil Aviation Authority.

Control Aviation Electronician  
Namibia Civil Aviation Authority  
Private Bag 12003  
Ausspannplatz  
Windhoek

Telephone: +264 61 702270  
Telefax: +264 61 702099  
AFS: FYWHYTYX  
E-mail: ants@dca.com.na

1.2 The service is provided in accordance with the provisions contained in the following ICAO documents:

- a) Annex 10, Aeronautical Telecommunications.
- b) Doc 8400, Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS-ABC).
- c) Doc 8585, Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.
- d) Doc 7030, Regional Supplementary Procedures.
- e) Doc 7910, Location Indicators.

### 2. Area of responsibility

Communication services are provided for the entire Windhoek FIR. Arrangements for such services on a continuing basis should be made with the Control Aviation Electronician. The Director: Civil Aviation is responsible for the application of the regulations concerning the design, type and installations of aircraft radio stations. Responsibility for the day-to-day operation of these services is vested in the Aviation Electronicians located at certain aerodromes. Enquiries, suggestions or complaints regarding any telecommunication service should be referred to the Control Aviation Electronician.

### 3. Types of service

#### 3.1 *Radio navigation services*

3.1.1 The following types of radio aids to navigation are available:

- a) Instrument landing system (ILS).
- b) VHF omni-directional radio range (VOR).
- c) Distance measuring equipment (DME).

#### 3.2 *Mobile/fixed services*

##### 3.2.1 *Mobile service*

Nil service.

##### 3.2.2 *Fixed service*

3.2.2.1 The messages to be transmitted over the Aeronautical Fixed Service (AFS) are accepted only if:

- a) They satisfy the requirements of ICAO Annex 10, Vol II, Chapter 3.
- b) They are prepared in the form specified in ICAO Annex 10.
- c) The text of an individual message does not exceed 200 groups.

3.2.2.2 General aircraft operating agency messages are only accepted for transmission to countries that have agreed to accept Class "B" traffic.

#### 3.3 *Broadcasting service*

Nil service.

#### 3.4 *Language used*

English.

#### 3.5 *Where detailed information can be obtained*

3.5.1 Details of the various facilities available for the en-route traffic can be found in Part 2, ENR 4.

3.5.2 Details of the facilities available at the individual aerodromes can be found in the relevant

sections of Part 3 (AD). In cases where a facility is serving both the en-route traffic and the aerodromes, details are given in the relevant sections of Part 2 (ENR) and Part 3 (AD).

#### 4. Requirements and conditions

The requirements of the Directorate of Civil Aviation and the general conditions under which the communication services are available for international use, as well as the requirements for the carriage of radio equipment, are contained in the Air Navigation Regulations of Namibia.

##### 4.1 Reserved

##### 4.2 Reserved

##### 4.3 Reserved

##### 4.4 Read back of Clearances

4.4.1 The flight crew must read back to the air traffic controller safety related parts of ATC clearances and instructions which are transmitted by voice.

The following items must always be read back:

- a) ATC route clearances in its entirety, and any amendments;
- b) Any clearances, or conditional clearance or instructions to hold short of, enter, line-up on, wait, take off from, cross, taxi or backtrack on, any runway or HLS;
- c) Any route and holding point specified in a taxi clearance;
- d) Any approach clearance;
- e) Assigned runway or HLS;
- f) Altimeter settings directed to a specific aircraft;
- g) Transition level, whether issued by a controller or contained in an automatic terminal information service (ATIS) broadcast;
- h) Radio and radio navigation aid frequency instructions;
- i) SSR codes, data link logon codes;

- j) Level instructions, direction of turn, heading and speed instructions.

4.4.2 The controller will listen to the read back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and will take immediate action to correct any discrepancies revealed by the read back.

4.4.3 The level of an aircraft must be preceded by the words "FLIGHT LEVEL" when related to standard pressure 1013.2hPa and must be followed by the word "FEET" when related to QNH or QFE.

##### 4.5 Other Clearances

4.5.1 Other clearances or instructions, including conditional clearances, must be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with

##### Conditional Clearances

4.5.2 In all cases a conditional clearance will be given in the following order and consist of:

- a) Identification (call sign);
- b) The condition (including position of the subject of the condition);
- c) The clearance; and
- d) Brief reiteration of the condition.eg:

ATS: "NMB285 BEHIND B777 ON SHORT FINAL LINE UP RUNWAY 26 BEHIND".

Pilot: BEHIND THE B777, LINING UP RUNWAY 26 NMB285

## GEN 3.5 METEOROLOGICAL SERVICES

### 1. Responsible service

1.1 Aviation Meteorological Service is provided by Namibia Meteorological Service of the Ministry of Works and Transport.

Namibian Meteorological Service  
12C Hügel Street  
Private Bag 13224  
Windhoek  
Namibia

Telephone: (264-61) 287 7001 (Deputy Director)  
Fax: (264-61) 287 7009

(264-62) 540059 (Aviation Forecasting Office)  
(264-62) 540327

Fax: (264-61) 287 7009  
Telex: (50908) 825 WK  
AFS: FYWHYMHO  
E-mail: fuirab@meteona.com

1.2 The service is provided in accordance with the provisions contained in the ICAO document Annex 3, Meteorological Service for International Air Navigation.

### 2. Area of responsibility

The main area of responsibility is Namibia.

### 3. Meteorological observations and reports

Table GEN 3.5.3 Meteorological observations and reports

Name of station/ Location indicator	Type and frequency of observations/ automatic observing equipment	Types of MET reports and supplementary information included	Observation system and site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
Walvis Bay/ Walvis Bay International Airport FYWB - 68098  Windhoek/ Eros Airport FYWW - 68109  Windhoek/ Windhoek International Airport FYWH - 68112	Wind speed - Automatic anemometer  Wind direction - Windrose automatic anemometer  Visibility - Estimated from fixed object by weather observers  Air/atmospheric pressure - Barometer/PPA 11	METAR  TAF's  ARFOR  SPECI  SYNOP  Supplementary information given on landing is:  Pressure, temperatures and wind speed and direction. Take off data is also provided.	For each aerodrome one observation site  Visibility runway visual range are mostly estimated from fixed object.  Cloud base is mostly calculated from temperature and dew point temperature.  Surface wind is obtained from anemometer and windrose.	12 hours  24 hours  24 hours	

Name of station/ Location indicator	Type and frequency of observations/ automatic observing equipment	Types of MET reports and supplementary information included	Observation system and site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
	Clouds - Weather observer SIG weather - Weather observer Temperatures - Thermometer		Transmissometer next to touchdown points only.		

#### 4. Types of service

- 4.1 Briefing.
- 4.2 Consultation of wind shear from incoming flights.
- 4.3 Flight documentation available for operators and flight crew members (TAF, ARFOR, SPECI and METARS).
- 4.4 Winds at different levels are also provided plus significant weather charts, to operators and flight crew members.
- 4.5 Take off data information is also provided on request: telephonically, fax or personally.

#### 5. Notification required from operators

- 5.1 One hour for internal flights.
- 5.2 Anything above five hours for non-scheduled international flights.
- 5.3 Three hours for scheduled international flights.

#### 6. Aircraft reports

Nil.

## 7. VOLMET Service

Table GEN 3.5.7 VOLMET service

Name of station	CALL SIGN identification (EM)	Frequency	Broadcast period	Hours of service	Aerodromes/ heliports included	Contents and format of REP and FCST and remarks
1	2	3	4	5	6	7
Walvis Bay International Airport	FYWB	Nil information available	Nil information available	Nil information available	Nil information available	68098
Eros Airport	FYWE					68109
Hosea Kutako International Airport	FYWH					68112
Windhoek VOR	WHV	114.50 MHz	CONS (1)	H24		METAR (1) Indicates continuous broadcast.
MB	Nil information available	126.8MHz	Nil information available	H24	Nil information available	Operational WI 100NM radius
OJ	Nil information available	126.8MHz	Nil information available	H24	Nil information available	Operational WI 100NM radius
RM	Nil information available	126.8MHz	Nil information available	H24	Nil information available	Operational WI 100NM radius
ST	Nil information available	126.8MHz	Nil information available	H24	Nil information available	Operational WI 100NM radius
WH	Nil information available	126.8MHz	Nil information available	H24	Nil information available	Operational WI 90NM radius
Standard R/T to be used in VOLMET broadcasts with reference to ICAO DOC 9377 Appendix 1.						

**8. SIGMET service**

**Table GEN 3.5.8 SIGMET service**

Name of MWO/ location indicators	Hours	FIR or CTA served	Type of SIGMET/ validity	Specific procedure	ATS unit served	Additional information
1	2	3	4	5	6	7
Windhoek FYWW - 68110	24 hours	World wide - no specification available	Any Sigmet information required (e.g. thunder storms, strong winds, severe turbulence)	No volcanic ash nor tropical cyclones over Namibia but hints are given to outgoing international flights if the area's to be visited are recognised to be with tropical cyclones or volcanic ash	Windhoek Tel: (062) 702490/1/2/3 Fax: (062) 702499	
Walvis Bay International Airport FYWB - 68109	12 hours (0300 to 1500 UTC)	World wide - no specification available				
Windhoek	0400 - 1900	Windhoek FIR	SIGMET/ 4 HR	Nil	Windhoek ACC	Nil

**9. Other automated meteorological services**

Nil.

## GEN 3.6 SEARCH AND RESCUE

### 1. Responsible service

1.1 The search and rescue service in Namibia is provided by the Namibia Civil Aviation Authority - Head of NAMSAR. The postal and telegraphic addresses of the Namibia Civil Aviation Authority are given under GEN 1.1.

1.2 When SAR operations are needed, a Rescue Co-ordination Centre is established, the address is as follows:

Namibia Civil Aviation Authority  
Search and Rescue Centre  
Eros Aerodrome

Telephone: +264 61 702290/1/2/  
3/4/5/6/7

Telefax: +264 61 702099  
Telex: (50908) 811/812  
AFIS: F Y H Q Y C Y X

1.3 The service is provided in accordance with the provisions contained in ICAO Annex 12 - Search and Rescue.

### 2. Area of responsibility

The search and rescue service is responsible for SAR operations within Windhoek FIR.

### 3. Types of service

3.1 Details of related rescue units are given in Table 3.6.3 - Search and Rescue Units. In addition, various elements of the State Police organisation and the armed forces are also available for search and rescue missions, when required. The aeronautical, maritime and public telecommunication services are also available to the search and rescue organisation.

3.2 All aircraft carry survival equipment, capable of being dropped, consisting of inflatable rubber dinghies equipped with medical supplies, emergency rations and survival radio equipment. Aircraft are equipped to communicate on 121.5 MHz, 123.1 MHz, 243 MHz, 500 MHz, 2182 KHz and 8364 KHz. Ground rescue teams are equipped to communicate on 121.5 MHz, 500 KHz and 8364 KHz. SAR aircraft and marine craft are equipped with direction-finding equipment and GNSS.

Table GEN 3.6.3 Search and Rescue Units

Name	Location	Facilities	Remarks
1	2	3	4
Eros	223630S 0170450E	Various fixed wing aircraft available SRG	
Arandis	222800S 0145900E	HEL-H B350 available F406	

### 4. SAR agreements

4.1 An agreement has been concluded between the SAR service of Namibia and the SAR service of the RSA concerning the provision of assistance upon receipt by the former of a request from the latter for aid. This agreement does not provide for facilitation of the overflight and landing of search and rescue aircraft without prior permission after dispatch of a

flight plan, for similar facilitation of the entry of surface vessels of the SAR service and their operation in border areas, for notification of entry to the authorities controlling entry, for defraying the costs of stop-overs, accommodation and transportation of crew members, and for direct communication between the two SAR services or, all common search and rescue matters. Copies of this agreement are available, upon request, from the Namibia Civil Aviation Authority.

4.2 Requests for the entry of aircraft, equipment and personnel from other States to engage in the search for aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to the Rescue Co-ordination Centre. Instructions as to the control which will be exercised on entry of such aircraft and/or personnel will be given by the Rescue Co-ordination Centre in accordance with a standing plan for the conduct of search and rescue in its area.

## 5. Conditions of availability

The SAR services and facilities in Namibia are available, at a charge to neighbouring States upon request to the Namibia Civil Aviation Authority, at all times when they are not engaged in search and rescue operations in their home territory. All facilities are specialised in SAR techniques and functions.

## 6. Procedures and signals used

### 6.1 *Procedures and signals used by aircraft*

Procedures for pilots-in-command observing an accident or intercepting a distress call and/or message are outlined in ICAO Annex 12, Chapter 5.

### 6.2 *Communications*

6.2.1 Transmission and reception of distress messages within the Windhoek Search and Rescue Area are handled in accordance with ICAO Annex 10, Volume II, Chapter 5, paragraph 5.3.

6.2.2 For communications during search and rescue operations, the codes and abbreviations published in ICAO Abbreviations and Codes (Doc 8400) are used.

6.2.3 The frequency 121.5 MHz is guarded continuously during the hours of service at all area control centres and flight information centres. In addition, the aerodrome control towers serving international aerodromes and international alternate aerodromes will, on request, guard the frequency 121.5 MHz. All coast stations guard the international distress frequencies.

### 6.3 *Search and rescue signals*

The search and rescue signals to be used are those prescribed in ICAO Annex 12, Chapter 5, and paragraph 5.10.

### 6.4 *Ground/air visual signal codes for use by survivors*

A space of 3 M should separate the symbols when more than one symbol is used.

Symbols		
1.	Require assistance	V
2.	Require medical assistance	X
3.	No or negative	N
4.	Yes or affirmative	Y
5.	Proceeding in this direction	↑

## GEN 4. CHARGES FOR AERODROMES/HELIPORTS AND AIR NAVIGATION SERVICES

### GEN 4.1 AERODROME/HELIPORT CHARGES

PART "A": APPLICABLE TO NAMIBIAN AIRPORTS COMPANY LIMITED (NAC). ALL CHARGES PUBLISHED UNDER PART "A" ARE QUOTED IN NAMIBIAN DOLLARS (N\$).

#### 1. Landing and Parking charges

The following charges are applicable to the following airports under the authority of the Namibia Airports Company (NAC): Hosea Kutako, Walvis Bay, Eros, Keetmanshoop, Luderitz, Ondangwa, Rundu and Katima Mulilo International Airports.

##### 1.1 Landing charges for International and Regional Traffic

INTERNATIONAL AND REGIONAL TRAFFIC			
Maximum certified mass in Kilograms of an aircraft up to and including:	NAC tariff excluding VAT 2017/2017	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
500	46.16	0.00	46.16
1000	84.14	0.00	84.14
1500	124.63	0.00	124.63
2000	166.17	0.00	166.17
2500	184.64	0.00	184.64
3000	243.03	0.00	243.03
4000	328.23	0.00	328.23
5000	387.19	0.00	387.19
6000	484.72	0.00	484.72
7000	553.94	0.00	553.94
8000	625.48	0.00	625.48
9000	703.95	0.00	703.95
10000	784.73	0.00	784.73
>10001, for every additional 1000kg or part thereof,	67.93	0.00	67.93
All landing charges for foreign-bound flights are zero-rated for VAT administration purposes.			

1.2 Landing charges for Domestic Traffic

DOMESTIC TRAFFIC LANDING CHARGES			
Maximum certified mass in kilogram of an aircraft up to and including:	NAC tariff excluding VAT 2017/2018	Value added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
500	46.16	6.92	53.08
1000	84.14	12.62	96.76
1500	124.63	18.69	143.32
2000	166.17	24.93	191.09
2500	184.64	27.70	212.34
3000	243.03	36.45	279.48
4000	328.23	49.23	377.47
5000	387.19	58.08	445.27
6000	484.72	72.71	557.43
7000	553.94	83.09	637.03
8000	625.48	93.82	719.30
9000	703.95	105.59	809.54
10000	784.73	117.71	902.44
10,001 kg and over for every additional 1,000kg or part thereof	67.93	10.19	78.12

1.3 Parking charges for International and Regional Traffic

AIRCRAFT PARKING CHARGES FOR INTERNATIONAL AND REGIONAL TRAFFIC			
Maximum certified mass in kilograms of an aircraft up to and including	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
500	6.69	-	6.69
1000	13.20	-	13.20
1500	19.06	-	19.06
2000	25.11	-	25.11
2500	32.44	-	32.44
3000	48.57	-	48.57
4000	68.25	-	68.25
5000	77.48	-	77.48
6000	86.68	-	86.68

AIRCRAFT PARKING CHARGES FOR INTERNATIONAL AND REGIONAL TRAFFIC			
Maximum certified mass in kilograms of an aircraft up to and including	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
7000	95.86	-	95.86
8000	105.08	-	105.08
9000	114.30	-	114.30
10000	177.95	-	177.95
10,001 kg and over for every additional 1,000kg or part thereof	23.69	-	23.69
All parking charges for foreign-bound flights are zero-rated for VAT administration purposes.			

#### 1.4 Parking charges for domestic traffic

DOMESTIC (AIRCRAFT PARKING CHARGES)			
Maximum certified mass in kilogram of an aircraft up to and including	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
500	6.69	1.00	7.70
1000	13.20	1.98	15.18
1500	19.06	2.86	21.92
2000	25.11	3.77	28.88
2500	32.44	4.87	37.30
3000	48.57	7.29	55.86
4000	68.25	10.24	78.49
5000	77.48	11.62	89.10
6000	86.68	13.00	99.68
7000	95.86	14.38	110.24
8000	105.08	15.76	120.84
9000	114.30	17.15	131.45
10000	177.95	26.69	204.64
10,001 kg and over for every additional 1,000kg or part thereof	23.69	3.55	27.24

## 2. Passenger Charges

The following passenger service charges are payable by an aircraft operator engaged in commercial and private air transport operations.

PASSENGER SERVICES CHARGES IN N\$			
Passengers	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
International Passengers	470	-	470
Regional Passengers (passenger departing on an aircraft whose final destination is an airport within Botswana, Lesotho, South Africa or Swaziland).	272	-	272
Domestic Passengers	123	18	141
All passenger service charges for foreign-bound flights are zero rated for VAT administration purposes			

## 3. Surcharges

### 3.1 Hourly tariffs for airport operations outside published hours of operation for International/Regional Traffic

HOURLY CHARGES FOR OPERATIONS AFTER THE PUBLISHED HOURS OF OPERATIONS IN N\$			
INTERNATIONAL AND REGIONAL FLIGHTS			
AIRPORTS	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
Hosea Kutako International Airport	10,424.61	-	10,424.61
Eros, Walvis Bay, Keetmanshoop, Ondangwa Airport	3,790.77	-	3,790.77
Lüderitz, Rundu, Katima Mulilo Airport	712.01	-	712.01
All after hours charges for foreign bound flights are zero-rated for VAT administration purposes.			

### 3.2 Hourly tariffs for airport operations outside published hours of operation for domestic traffic

DOMESTIC FLIGHTS			
AIRPORTS	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
Hosea Kutako International Airport	10,424.61	1,563.69	11,988.30
Eros, Walvis Bay, Keetmanshoop, Ondangwa Airport	3,790.77	568.62	4,359.39

AIRPORTS	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
Lüderitz, Rundu, Katima Mulilo Airport	712.01	106.80	818.82

### 3.3 Other charges

#### 3.3.1 Impounding charges

Description	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
Impounding of vehicles parked on the restricted areas (per day or part thereof)	427.21	64.08	491.29

#### 3.3.2 Tow away charges

Tow away charges for vehicles parked in restricted areas	NAC tariff excluding VAT 2017/2018	Value Added Taxation (VAT)	NAC tariff including VAT 2017/2018
	N\$	N\$	N\$
Sedans	712.01	106.80	818.82
Mini buses, light delivery & sports utility vehicles	1,139.22	170.88	1,310.11
Trucks and busses	2,136.04	320.41	2,456.45

### 3.4 Security Charges

Type of traffic	NAC tariff 2017/2018
International	91
Regional	71
Domestic	51

3.5 Aviation operational charges

NAC AVIATION OPERATIONAL CHARGES	
Description	NAC tariff 2017/2018
	N\$
Permanent Access Permit	232.10
Seasonal Access Permit	126.60
Temporal Access Permit	84.40
Lost Permit Replacemen (1 <sup>st</sup> time)	232.10
Permanent Vehicle Permit	379.80
Temporal Vehicle Permit	84.40
Reflector Jacket	52.75
Beacon Light	158.25
Lost Permit Replacement (2 <sup>nd</sup> time)	316.50
Wheel clamping	211.00

4. Noise Related Items

At present, due to their remoteness, no noise abatement procedures are in effect at any NAC aerodrome. Jet aircraft not meeting Stage 3 requirements will need special permission for operation into and out of Eros Aerodrome on the outskirts of Windhoek City.

## 5. Exemptions and reductions

5.1 Aircraft engaged in Search and Rescue operations are exempted from all airport/aerodrome charges upon presentation of proof that such aircraft was designated by the Namibia Civil Aviation Authority (NCAA) to engage in Search and Rescue operations for that particular flight.

5.2 Aircraft certificated in the private category in their Airworthiness Certification are exempted from passenger charges. All other aircraft are not exempted from passenger charges, irrespective of the use of the aircraft save where another exemption under these rules apply.

5.3 Transit passengers, defined as those passengers:

5.3.1 Same plane through transit;

5.3.2 Transit through flight or change of gauge, ticketed as one flight; are exempted from charges at such airport/aerodrome up to and including 6 hours.

5.4 Transfer passengers, defined as those passengers:

5.4.1 Online transfer – a change from the service of one carrier to another service of the same carrier.

5.4.2 Interline Transfer – the service of another carrier (interline carrier) and ticketed over two or more flight coupons and shown in the itinerary i.e ticketed points are exempted from charges at such airport/aerodrome up to and including 6 hours.

5.5 Namibian and foreign State aircraft in the service of the military, customs or police are exempted from landing and parking charges, but not from passenger charges, upon presentation of proof that:

5.5.1 Such aircraft is in the service of the military, customs or police.

5.5.2 The purpose of the particular flight is related to military, customs or police operations; and

5.5.3 In case of a foreign aircraft, that such aircraft is a State aircraft.

5.6 Landing charges on test flights are ordered by the Namibia Civil Aviation Authority.

5.7 Mercy flights are exempted from after hours charges but not from passenger, landing or parking charges.

## 6. Methods of payment

Landing charges and parking charges are levied:

6.1 at daily rates payable at the time the aerodrome is used, or

6.2 in the case of regular users, on demand at the end of each calendar month in respect of charges accruing during the month, provided prior arrangement for a Bank Guarantee of Payment is in place.

6.3 prompt payment of passenger service charges at departure AD, to the particular Aerodrome supervisor.

6.4 prompt payment upon arrival, to the particular Aerodrome supervisor, the new applicable landing and parking fees according to the maximum certified mass in kilograms on an aircraft.

- 6.5 Non-compliance with this Regulation will result in the Airports Company Limited resorting to other strict measures i.e. refusing to provide service or charging annual interest of 2.5% above prime rate, on all outstanding balances exceeding 30 days from Invoice date etc.
- 6.6 Aircraft operators in and out of any airport operated by Namibia Airports Company and who do not have an account with Namibia Airports Company are advised to utilize the speed point facility situated at the fire station or the apron office. Alternatively aircraft operators may pay for the services rendered in cash.
- 6.7 The NAC may, at an airport/aerodrome under its management, refuse the provision of any relevant activity (as defined in section 1 of the Act) to any user with an outstanding account in respect of airport/aerodrome charges.
- 6.8 All other rules and charges is contained in the Government Notice No 20 published in the Government Gazette of 5 February 1999 (No 2045), remain applicable, save where amended by publication in terms of s 5(1) of the Act.

## 7. Cargo

Nil

# PART "B": AERODROME CHARGES APPLICABLE TO SWAKOPMUND

## SWAKOPMUND AERODROME CHARGES

### 1. LIABILITY TO PAY AERODROME CHARGES

- 1.1 In terms of the provisions of Part 139 of the NAMCARS, paragraph 139.01.06 aerodrome charges shall be payable by the operator, pilot and/or owner of an aircraft to Swakopmund Municipality.
- 1.2 In terms of the provisions by the council of the Municipality of Swakopmund under section 30 (1)(u) of the Local Authority Act, 1992 (Act 23 of 1992) as amended aerodrome charges shall be payable by the operating pilot and/or owner of an aircraft to Swakopmund Municipality. The council of the Swakopmund Municipality further amends the charges and fees in respect of aerodrome facilities, as set out in the schedule (refer to GEN 4.1-7): Effective 01 July, with an annual increment of 5%
- 1.3 Aerodrome charges for aircraft and passengers consists of:
- 1.3.1 a landing charge payable at the Swakopmund Municipal Aerodrome at the time a flight terminates.
- 1.3.2 a parking charge payable at the Swakopmund Municipal Aerodrome where an aircraft is parked.
- 1.3.3 a passenger service charge payable at Swakopmund Municipal Aerodrome before a flight commences (payable by the aircraft operator, pilot and/or owner engaged in commercial and /or private air transport operations;
- 1.3.4 An administration fee per transaction i.e admin and documentation fee (for approved account holders) and a cash handling & admin fee (for non account holders ) will be payable at the Swakopmund Municipal Aerodrome.
- 1.3.5 Private clients flights passengers, only charged when utilizing the terminal facility;

### 2. NOTIFICATION OF MOVEMENT OF AIRCRAFT

- 2.1 Immediately after an aircraft has landed at Swakopmund Municipal Aerodrome, the operator, pilot and/or owner of that aircraft shall give written notice to the aerodrome officials at Apron office, on the prescribed

landing/departure register, of the time of arrival of that aircraft together with such other information as required by the aerodrome officials.

- 2.2 Immediately before an aircraft is to take off from Swakopmund Municipal Aerodrome, the operator, pilot and/or owner of that aircraft shall give written notice on the prescribed landing/departure register to the aerodrome officials, of the expected time of departure of that aircraft and any such information required by the aerodrome officials and pay all aerodrome charges payable to the aerodrome officials, unless such operator has previously entered into a credit agreement with Swakopmund Municipal Aerodrome, which agreement is valid and operational at the time of departure.

### 3. LANDING AND PARKING CHARGES

- 3.1 The following landing and parking charges are applicable to Swakopmund Municipality for the use of the facilities at Swakopmund Municipal Aerodrome.

3.1.1 The charges, **inclusive of VAT**, applicable in respect of aircraft other than a helicopter, are as follows: Training flight touch and goes [T&G] payable of 20% of aircraft landing fees. However, all **full stop** landing irrespective the activity, should be charged normal landing fee.

#### AERONAUTICAL CHARGES: 2022/2023

Maximum certificated mass in Kilogram of an aircraft up to and including:		Landing Charges (N\$)	Helicopter landing, Training flight T&G's and Parking shall be charge 20% of the appropriate landing charge. (N\$)
A	500 kg	42.65	8.50
B	1 000 kg	68.70	13.75
C	1 500 kg	100.70	20.15
D	2 000 kg	137.40	27.50
E	2 500 kg	175.30	35.10
F	3 000 kg	209.65	41.95
G	3 500 kg	245.20	49.05
H	4 000 kg	279.55	55.90
I	5 000 kg	349.40	69.90
J	6 000 kg	419.30	83.85
K	7 000 kg	490.40	98.10
L	8 000 kg	560.25	112.05
M	9 000 kg	629.00	125.80
N	10 000 kg	698.85	139.80
Thereafter for every additional 1000kg or part thereof an additional:		68.00	21.30

### PASSENGER SERVICE CHARGES

Non-scheduled flights	91.20
Scheduled Flights	91.20

### ADMINISTRATION CHARGES

Admin & documentation fee (approved account holders only)	5.90
Cash handling & admin fee (non account holders only)	18.95

### ALL THE ABOVE PRICES ARE INCLUSIVE OF VAT

#### 3.2 Reductions

- 3.2.1 When a landing is carried out by helicopter, the charge shall be 20% of the appropriate landing charge.
- 3.2.2 Training flight touches and goes [T&G] payable of 20% of aircraft landing fees but full stop landing will be charge appropriate landing charge

#### 3.3 Exemptions

- 3.3.1 Namibian Presidential and foreign state aircraft;
- 3.3.2 Aircraft engaged in search and rescue operations;
- 3.3.3 Aircraft engaged in test flights, when such flights are required by the Executive Director of Namibia Civil Aviation Authority (proof of such request to be provided to validate the exemption);
- 3.3.4 Any crew member on duty;
- 3.3.5 Any person under the age of two (2) years.
- 3.3.6 Skydive Parachute passenger charge;
- 3.4 Transit passengers, defined as those passengers;
  - 3.4.1 Same plane through transit without leaving the AD site before departure
- 3.5 Namibian and foreign State aircraft in the service of the military, customs or police are exempted from landing and parking charges, but not from passenger charges, upon presentation of proof that:
  - 3.5.1 Such aircraft is in the service of the military, customs or police.
  - 3.5.2 The purpose of the particular flight is related to military, customs or police operations; and
  - 3.5.3 In case of a foreign aircraft, that such aircraft is a State aircraft.
- 3.6 Landing charges on test flights are ordered by the Namibia Civil Aviation Authority.
- 3.7 Mercy flights are exempted from after-hours charges but not from passenger, landing or parking charges.

3.8 Motor-glider and microlight is certainly exempted from paying landing charges hence, its weight below 450kg

#### 4. PASSENGER SERVICE CHARGES

4.1 The passenger service charge shall be calculated on the basis of the number of embarking passengers on an aircraft and the appropriate tariff applicable to each passenger as set out below:

4.1.1 Per departing passenger on a scheduled flight: N\$ 91.20 including VAT

4.1.2 Per departing passenger on a non-scheduled flight: N\$ 91.20 including VAT

#### 5. GENERAL RULES

5.1 Should the aircraft be on a permanent or long term lease to a private person, private operator, commercial operator, airline, Charter Company, etc, the lessee of the aircraft may be charged instead of the registered owner.

5.2 A written request to this effect has to be submitted to the accounting officer of Swakopmund Municipality, which request will not unreasonably be withheld. The final decision in this regard is however at the discretion of the accounting officer of the Swakopmund Municipal Aerodrome.

5.3 Aerodrome user or aircraft owner should give the aerodrome personnel official notification for aircraft change e.g. sell, buy or rental if not so then last user of the aircraft will be liable for landing fee and etc.

#### 6. METHOD OF PAYMENT FOR LANDING, PARKING AND PASSENGER DEPARTURE CHARGES:

Landing charges, parking charges, passenger service charges and administration charges are levied:

6.1 At daily rates payable in cash or utilize the speed point facility, at the aerodrome apron office, at the time the aerodrome is used, or

6.2 In the case of a regular user where the registered owner or operator has not defaulted in respect of payment of previous accounts and who is creditworthy and of good standing, without demand at the end of each calendar month in respect of charges accrued during that month, provided that, at the discretion of the accounting officer of the Swakopmund Municipal Aerodrome, prior arrangement for a Bank guarantee of payment is in place.

6.3 Non-compliance with these rules and regulations will result in the management of Swakopmund Municipality resorting to prohibiting movement of aircraft on the aerodrome and other strict measures i.e. refusing services, clamping of aircraft when parked and charging interest at "MORA" rate on all outstanding balances exceeding thirty (30) days from Invoice date, as well as permanent withdrawal of credit facilities if any.

6.4 Should the pilot refuse or fail to fill in the landing/departure register, Swakopmund Municipality will charge a flat rate of "rate N" to the registered owner of the aircraft, subject to its rights set out herein. All the pilots are obliged to fill in landing/departure register irrespective whether they are account holder or non-account holder.

**Note:** Note must be taken that the Swakopmund Municipal Aerodrome is NOT a state/parastatal owned or operated aerodrome but is privately owned and operated by the Swakopmund Municipality.

### PART "C": AERODROME CHARGES APPLICABLE TO ARANDIS

#### ARANDIS AERODROME CHARGES

## 1. Liability to pay aerodrome charges

1.1 In terms of the provisions by the council of the Municipality of Swakopmund under section 30 (1) (u) of the Local Authority Act, 1992 (Act 23 of 1992) as amended, aerodrome charges shall be payable by the operating pilot and/or owner of an aircraft to Swakopmund Municipality. The council of the Swakopmund Municipality further amends the charges and fees in respect of aerodrome facilities, as set out in the schedule (refer to GEN 4.1-7): Effective 01 July 2017, with an annual increment of 5%.

1.2 Aerodrome charges consists of:

1.2.1 a landing charge, payable at the Arandis aerodrome at the time a flight terminates.

1.2.2 a passenger service charge, payable at Arandis aerodrome before a flight commences.

1.2.3 Parking at Arandis aerodrome is free of charge at owner/operator risk

## 2. Notification of movement of aircraft

2.1 Arandis aerodrome is a private airfield and prior permission must be obtained. Diversions and

unforeseen landings must be reported within 48 hours. Requests or notices of landing must be sent via fax to Southern Energy Company, Fax no 064 20 3984 or via e-mail to [sharonb@sec.com.na](mailto:sharonb@sec.com.na), atleast 12 hours before a flight. Copies of the Request Form are available from Sharon Burger at [sharonb@sec.com.na](mailto:sharonb@sec.com.na). The following information will be required:

- a) Aircraft Registration.
- b) Aircraft Type
- c) Operator/Owner's Name and address
- d) Date of Landing
- e) Number of passengers embarking
- f) Name of Pilot

2.2 Before an aircraft is to take off from Arandis aerodrome the operator of that aircraft shall make sure that proper authorisation for landing was obtained.

## 3. Landing Charges

3.1 The following landing and parking charges are applicable to the Arandis Aerodrome.

3.2 The charges, **exclusive of VAT**, applicable in respect of aircraft other than a helicopter, are as follows:

Maximum certificated mass in Kilogram of an aircraft up to and including:		Landing Charges (N\$ Excl VAT)
A	500	15.00
B	1000	30.00
C	1500	70.00
D	2000	75.00
E	2500	90.00
F	3000	110.00

Maximum certificated mass in Kilogram of an aircraft up to and including:		Landing Charges (N\$ Excl VAT)
G	4000	160.00
H	5000	200.00
I	6000	250.00
J	7000	360.00
K	8000	400.00
L	9000	450.00
M	10000	500.00
Thereafter for every additional 1000kg/2200lb or a share thereof an additional rate of:		60.00
Passenger fees – (N\$ Incl VAT p/p)		50.00

### 3.3 Exemptions

- 3.3.1 Namibian Presidential and foreign state aircraft
- 3.3.2 Aircraft engaged in search and rescue operations
- 3.3.3 Test flights ordered by the Namibia Civil Aviation Authority.

### 3.4 Reductions

- 3.4.1 No reductions for landings carried out for the purpose of aircrew training, unless approved in writing by airport management.

## 4. Passenger service charges

- 4.1 The passenger service charge shall be calculated on the basis of the number of embarking passengers on an aircraft and the appropriate tariff applicable to each passenger as set out below:

4.1.1 Per departing passenger on a scheduled flight: N\$ 50.00 including VAT

4.1.2 Per departing passenger on a non-scheduled flight: N\$ 50.00 including VAT

### 4.2 Exemptions

- 4.2.1 Namibian and foreign state aircraft
- 4.2.2 Aircraft engaged in search and rescue operations
- 4.2.3 Aircraft in the private operation category
- 4.2.4 Aircraft engaged in test flights, when such flights are required by the Namibia Civil Aviation Authority.
- 4.2.5 Any crew member on duty
- 4.2.6 Any person under the age of two

## 5. General rules

Should the aircraft be on a permanent or long lease to a private person, private operator, commercial operator, airline, charter company, etc, the lessee of the aircraft may be charged instead of the registered owner. A request to this effect has to be submitted in writing to the accounting officer of the West Coast Aviation. which request will not unreasonably be withheld. The final decision in this regard is however at the discretion of the accounting officer of the Arandis Airfield.

### 6. Method of payment for landing, parking and operator's departure fee:

6.1 Landing charges and passenger service charges are levied:

6.1.1 At daily rates payable at presentation of invoice from the accounting officer. No payments to be made to the airport personnel.

6.1.2 In the case of a regular user where the registered owner or operator has not defaulted payment of previous accounts and who is credit worthy and of good standing, on demand at the end of each calendar month in respect of charges accruing during that month, provided that, at the discretion of the accounting officer of the Arandis Airfield prior arrangement for a Bank Guarantee of payment is in place.

6.1.3 Non compliance with these rules and regulations will result in the management of Arandis Airfield resorting to prohibiting movement of aircraft on the airfield.

**Note:** Note must be taken that the Arandis Aerodrome is not a state/parastatal owned or operated aerodrome but is owned and operated by the West Coast Aviation, which is a private entity entirely.

## GEN 4.2 AIR NAVIGATION SERVICE CHARGES

### 1. VSAT Charges

- 1.1 Under the authority of Republic of Namibia, effective 19 April 2001, all Southern African Development Community (SADC) VSAT network charges attributable to Namibia will be billed and collected by the International Air Transport Association (IATA) on behalf of Air Traffic and Navigation Services (ATNS) Company LTD of South Africa, which has been designated the agent of Namibia with respect to the VSAT network at the following:

International Air Transport Association(IATA), Route de L'aéroport 33,

P.O. Box 416, CH-1215 Geneva 15 Airport, Switzerland.

Facsimile +41 (22) 799-2678

AFTN: LSGGIATA

SITA: GVALDXB

TELEX: 415586

- 1.2 As previously agreed, the flat rate charge has been restructured using FIR crossing in SADC VSAT equipped States' airspace to best reflect system usage. The FIR crossing charge denominated in United States Dollars (USD) was recently reviewed and will be effective as from 01 June 2009, as follows: The flat rate charge per FIR crossing will be **Nine US Dollars sixty cents**. FIR crossing charge per flight, will be payable from the effective date until further notice. This charge will be revised on a regular basis in consultation with IATA and other representative user groups depending on changes in operating costs, number of additional remote sites, aircraft movements, and other variable cost elements. NOTAM will also be issued by other states/service providers.

### 2. SADC VSAT invoicing and Payment Advice

- 2.1 The Southern African Development Community (SADC) Very Small Aperture Terminal (VSAT) charge is incurred when flights cross international Flight Information Region (FIR) boundaries or international borders of states, where the air traffic control centres are equipped with SADC VSAT satellite communications system. The states currently equipped with VSAT are: Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe, Madagascar, Burundi, and Rwanda.
- 2.2 Payment terms are 30(thirty) days from the invoice date. Failure to settle accounts within the prescribed period may result in the service being denied which in actual fact means that aircraft/s will be grounded without further notice.

### 3. Primary Payment Method

All invoices above USD 250.00 must be settled in USD directly with International Air Transport Association (IATA) to the following bank account:

United Bank of Switzerland

Swift: UBSWCHZH12A

For IATA USD Bank A/C No. 332.208.53K (Rubrique ATC USD)

8 rue du Rhône - 1211 Geneva 2 Depôt

Switzerland

**Important:** Please quote the invoice reference number (as printed on the invoice) on the back of the cheque or as a bank transfer reference.

### 4. Other Payment options.

To facilitate payment of low value invoices, ATNS has introduced two alternative methods for payments of invoices of USD 250.00 or less which are detailed below

#### a) Option one – Direct to ATNS CO Ltd (Credit Card).

For invoices USD 250.00 or less, an enclosure to the invoice will provide for payment, of the SADC VSAT charges portion only, by VISA or MasterCard credit card. The credit card will be debited with the South African Rand equivalent of the US Dollar amount authorised. The exchange rate used for determining the Rand equivalent will be the Rand/US Dollar exchange rate ruling on the day of receipt by ATNS of the authorisation. Please ensure that all fields are completed correctly to ensure that the correct credit card account is debited. This form should be faxed to ATNS CO Ltd who will debit the credit card, and advise IATA of settlement.

#### b) Option two – Direct to ATNS CO Ltd (Direct deposits)

For invoices USD 250.00 or less, payment for the SADC VSAT portion only of the invoice, may be made in ZAR (South African Rand) to the account of Air Traffic and Navigational Co. Ltd (ATNS) in South Africa. The Bank account details are:

Account Name:	Air Traffic and Navigation Services SOC LTD – VSAT – CURRENT ACCOUNT (RAND)
BANK:	FIRSTRAND BANK Ltd
BRANCH:	RMB Corporate Banking Johannesburg
BRANCH CODE:	255005
ACCOUNT Number:	62693726526
SWIFT CODE:	FIRZAJJ

**Important:** The exchange rate to be used in determining the Rand equivalent of the US Dollar amount invoiced is the month end spot rate on the date of the invoice. The rate to be used for each invoice will be printed on the SADC VSAT movement / data sheet attached to the invoice.

Please quote the invoice reference number on the deposit slip and fax it to ATNS Co.Ltd. (Attn: VSAT Debtor or the Supervisor), Fax No. +27 11 607 1570, Tel No. +27 11 607 1217/1275/1168/1148/1220 and who will then advise IATA of settlement.

## 5. En-Route, Terminal and Aerodrome Control Charges

In terms of Government Gazette No. 6696 dated 31<sup>st</sup> August 2018, revised En-Route, Terminal Control Area and Aerodrome air navigation service charges are payable to the Namibia Civil Aviation Authority in terms of the amended Regulations. The commencement date for the revised air navigation service charges is 1 December 2018.

### 5.1 En-Route Charges

5.1.1 Means the amount payable by the holder or participant, inclusive of an owner or operator, in respect of a flight undertaken within the Windhoek Flight Information Region as designated by the Authority;

5.1.2 The en-route charges shall be calculated using the following formula:

En-route Charge = Distance x  $\sqrt{\text{MTOW}}$  (Maximum Take Off Weight) x C<sub>1</sub>

Where - MTOW is in kilograms (kg); and

Distance in nautical miles (NM); and

C<sub>1</sub> is a constant; and

En-Route Charge in N\$

5.1.2.1 Where the MTOW of an aircraft is greater or equal to 5700 kg: - Constant C<sub>1</sub> = 0.055; and

5.1.2.2 Where the MTOW of an aircraft is less than 5700 kg: - Constant C<sub>1</sub> = 0.02;

5.1.2.3 The constant is subject to periodic review by the Authority and, upon approval by the Minister, the publication thereof in the Gazette;

5.1.2.4 No en-route charge shall be payable to the Authority in respect of any aircraft engaged in a flight which commences and terminates at the same airport for training purposes; and

5.1.2.5 No en-route charge shall be payable in respect of any aircraft engaged in a military, customs, police or search and rescue flight, or test flights ordered by the Executive Director of the Authority to determine the serviceability of aircraft systems or flights.

## 5.2 Terminal Control Area Charge or TMA

5.2.1 Means the amount payable by the holder or participant, inclusive of an owner or operator, in respect of a flight entering, exiting, transiting or undertaken within any TMA for air navigation services provided by the authority;

5.2.2 The terminal control area (TMA) charge shall be calculated using the formula:

$$\text{TMA Charge} = \text{MTOW}^{0.8} \times C_2$$

Where - MTOW is in kilograms (kg); and

C<sub>2</sub> is constant; and

TMA Charge in N\$

5.2.2.1 Constant C<sub>2</sub> = 0.3;

5.2.2.2 The constant is subject to periodic review by the authority and, upon approval by the Minister, the publication thereof in the gazette;

5.2.2.3 The TMA charge in respect of a helicopter or a fixed wing flight which is engaged solely for the purpose of aircrew training, shall be 20 percent of the TMA charge calculated using the TMA charge formula specified above; and

5.2.2.4 No TMA charge shall be payable in respect of any aircraft engaged in a military, customs, police or search and rescue flight, or test flights ordered by the Executive Director to determine the serviceability of aircraft systems or flights.

## 5.3 Aerodrome Charge or ADR

5.3.1 Means the amount payable by the holder or participant, inclusive of an owner or operator, in respect of a flight arriving, departing, transiting or undertaken within any control zone (CTR) or aerodrome traffic zone (ATZ);

5.3.2 The aerodrome charge (ADR charge) shall be calculated using the following formula:

$$\text{ADR Charge} = \text{MTOW}^{0.8} \times C_3$$

Where - MTOW is in kilograms (kg); and

C<sub>3</sub> is a constant; and

TMA Charge in N\$

5.3.2.1 Constant C<sub>3</sub> = 0.2;

5.3.2.2 The constant is subject to periodic review by the Authority and, upon approval by the Minister, the publication thereof in the Gazette;

5.3.2.3 The ADR charge in respect of a helicopter or a fixed wing flight which is engaged solely for the purpose of aircrew training, shall be 20 per cent of the TMA charge calculated using the TMA charge formula specified above; and

5.3.2.4 No ADR charge shall be payable in respect of any aircraft engaged in a military, customs, police or search and rescue flight, or test flights ordered by the Executive Director to determine the serviceability of aircraft systems or flights.

#### 5.4 Invoicing and Payment

5.4.1 Invoices issued by the Namibia Civil Aviation Authority or designated third party on behalf of the Authority to holder or participant, inclusive of an owner or operator for services rendered are due and payable within 30 days from the date of invoice.

5.4.2 Failure to pay invoices by the due date may result in the provision of air navigation services being declined as provided for in terms of Section 64(5) of the Civil Aviation Act No.6 of 2016.

5.4.3 All payments due must be deposited in the Namibia Civil Aviation Authority bank account as detailed below:

Bank name:	Standard Bank Namibia Ltd.
Account Name:	Aeronautical Fees
Account Number:	04 164 8110
Branch Code:	082672
Branch Name:	Ausspannplatz Branch
SWIFT Code:	SBNMNX

### 6. Civil Aviation Safety Charge

In terms of Government Gazette No. 6696 dated 31<sup>st</sup> August 2018, a Civil Aviation Safety charge is payable to the Namibia Civil Aviation Authority in terms of the amended Regulations. The commencement date for the safety charges is 1<sup>st</sup> December 2018.

#### 6.1 Civil Aviation Safety Charge

6.1.1 Means the amount payable to the Authority by a holder or participant and inclusive of an owner or operator, providing air services on the departure of a flight from an aerodrome within the territory of Namibia.

6.1.2 A civil aviation safety charge payable is:

- N\$30.00 per available seat for domestic flights, and
- N\$54.00 per available seat for international flights.

6.1.3 Value Added Tax is not payable on the civil aviation safety charge.

#### 6.2 Supporting information

6.2.1 Information relating to the total number of departures and type of aircraft per owner or operator on domestic and international flights, shall be provided monthly –

- by the Air Navigation Services Unit of the Authority, in respect of flights departing from aerodromes manned by air traffic controllers; and
- by the relevant aerodrome licence holder or operator of an aerodrome in respect of flights departing from aerodromes not manned by air traffic controllers.

6.2.2 The Authority shall, on receipt of the information referred to in 6.2.1, verify the accuracy and completeness of data received from the operators of aerodromes involved and Air Navigation Services Unit of the Authority.

6.2.3 The owner or operator of the relevant air services shall be subjected to a compliance audit as instructed or done by the Authority at any time determined by the Executive Director.

6.2.4 Without prejudice to 6.2.3 it shall be the responsibility of the aircraft owner or operator providing air services to provide the Authority with correct information on the number of departures and type of aircraft used in case of conflicting data, for verification purposes.

### 6.3 Invoicing and payment

6.3.1 Invoices issued by the Namibia Civil Aviation Authority or designated third party on behalf of the Authority to holder or participant, inclusive of an owner or operator for services rendered are due and payable within 30 days from the date of invoice.

6.3.2 Failure to pay invoices by the due date may result in service being declined in terms of Section 64(5) of the Civil Aviation Act No 6 of 2016.

6.3.3 All payments due must be deposited in the Namibia Civil Aviation Authority bank account as detailed below:

Bank name:	Standard Bank Namibia Ltd.
Account Name:	NCAA Corporate Receiving
Account Number:	04 267 7068
Branch Code:	082672
Branch Name:	Ausspannplatz Branch
SWIFT Code:	SBNMNaN