ANGOLAN CIVIL AVIATION AUTHORITY

AIP

AERONAUTICAL INFORMATION SERVICE

PART 1

GENERAL (GEN)

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GEN 0.1 PREFACE

1 Name of the publishing authority

The AIP of the Republic of Angola is published under the authority of the Instituto Nacional da Aviação Civil.

Post address:

Instituto Nacional da Aviação Civil
Caixa Postal 569
Luanda Angola
Tel: +244 - 222- 338596 or 335936
Fax: +244- 222- 390529 or 339356
AFS: FNLUYAYX
Email: inavic2@snet.co.ao , inavic@snet.co.ao
Telegraphic address: Aeronautical Luanda.

2 Applicable ICAO documents

This edition of the Aeronautical Information Publication (AIP) has been prepared in accordance with the Standards and Recommended Practices of Annex 15 to the Convention on International Civil Aviation and the Aeronautical Information Services Manual ICAO Doc 8126-AN 872. Charts contained in this AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the Aeronautical Chart Manual ICAO Doc 8697-AN 889. Differences from ICAO Standards, Recommended Practices and Procedures are given in subsection GEN 1.7

3 The AIP structure and established regular amendment interval.

3.1 The AIP structure

The AIP forms part of the Integrated Aeronautical Information Package, details of which are given in subsection GEN 3.1 the principal AIP structure is shown in graphic form on page GEN 0.7-1

This AIP, issued in one volume is the basic aeronautical information document for Angola and contains aeronautical information of a lasting character essential to air navigation.

The AIP Angola in accordance with the Integrated Aeronautical Information Package is divided into three parts, General (GEN), En-route (ENR) and Aerodromes (AD), each of which is further divided into sections and subsections containing, as applicable various types of Aeronautical Information.

3.1.1 Part 1 — General (GEN)

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

GEN 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 1

GEN 1. — **National Regulations and Requirements**
Designated authorities; Entry, transit and departure of passengers and crew; Entry, transit and departure of cargo; aircraft instruments, equipment and flight documents; summary of national and international agreements/conventions; and Differences from ICAO Standards, Recommended Practices and Procedures.

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.

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

GEN 4. — Charges for Aerodromes/Heliports and Air Navigation Services - Aerodrome/heliports; air navigation services and other charges.

GEN 5. — Issue of aeronautical licenses - General rules concerning licenses and validation of foreign aeronautical licenses.

3.1.2 Part 2 — En-route (ENR)

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

ENR 0. — Table of contents to part 2. Preface; Record of AIP Amendments; Record of AIP Supplements; Checklist of AIP pages; List of hand amendments to the AIP; Table of Contents to Part 2.

ENR 1. — General Rules and Procedures - General rules; Visual flight rules; Instrument flight rules; ATS airspace classification; Holding, approach and departure 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.

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.

ENR 3. — ATS Routes - Detailed description of lower ATS routes; upper ATS routes; Area navigation routes; helicopter routes; other routes; and En-route holding.

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.

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; Bird migration and areas with sensitive fauna.

ENR 6. — En-Route Charts - En-route Chart — ICAO and index charts.

3.1.3 Part 3 — Aerodromes (AD)
Part 3 consists of four sections containing information as briefly described hereafter.

AD 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 3.

AD 1. — Aerodromes/Heliports - Introduction; Aerodrome/heliport availability; Rescue and fire fighting services; Index to aerodromes and heliports and grouping of aerodromes/heliports.

AD 2. — Aerodromes - Detailed information about aerodromes, including helicopter landing areas, if located at the aerodromes.

AD 3. — Heliports - Detailed information about heliports (not located at aerodromes).

3.2 Regular Amendment Interval
AIP Angola is only available in English and is maintained up-to-date by an amendment service at regular intervals of twice a year. The publication dates will be on the first AIRAC dates of June and December of each year.

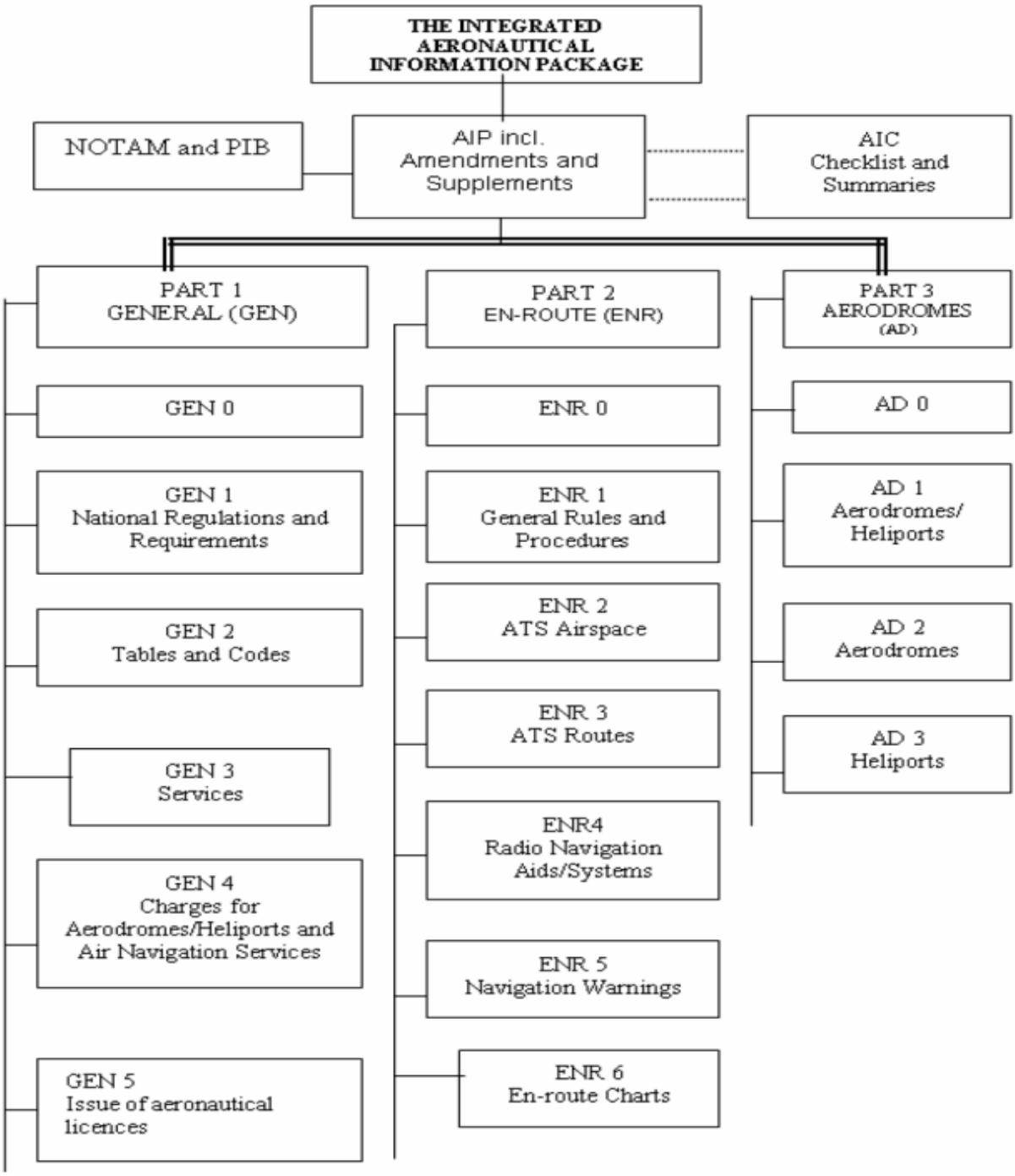
AIP amendment consists of reprinted pages and in the case of minor amendments, manuscript corrections; amendments together with checklists are normally issued as and when necessary. When an AIP Amendment will not be published at the established interval or publication dates, a nil notification shall be originated and distributed by the monthly printed plain-language summary of NOTAM.

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 Integrated Aeronautical Information Package should be referred to:

Post address:

Instituto Nacional da Aviação Civil
Caixa Postal 569
Luanda Angola
Tel:244 - 222- 338596 or 335936
Fax:244 - 222- 390529 or 339356
Telex:99 1234
AFS:FNLUYAYX
Email: inavic2@snet.co.ao
URL: http://www.inavic.net


THE INTEGRATED AERONAUTICAL INFORMATION PACKAGE
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AIP incl. Amendments and Supplements
AIC Checklist and Summaries
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5 Miscellaneous information

This edition has been produced under the supervision of the Instituto Nacional da Aviação Civil de Angola, with the cooperation of all parties involved in the aeronautical environment, and the public authorities of the República de Angola. However, this document does not supersede any specific law and/or regulation issued from time to time by appropriate authorities.

GEN 0.2 RECORD OF AIP AMENDMENTS

NR/Year	Publication date	Effective date
01/2009	17 DEC 2009	14 JAN 2010
01/2010	18 NOV 2010	13 JAN 2011

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GEN 0.3 RECORD OF AIP SUPPLEMENTS

NR/Year	Subject	AIP section(s) affected	Period of validity
06/2010	Enhancement of AORRA	ENR 3.3	From 13 JAN 2011

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GEN 0.6 TABLE OF CONTENTS TO PART 1

GEN 1.1 DESIGNATED AUTHORITIES

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

1 Civil Aviation

Postal address:

Instituto Nacional da Aviação Civil
Caixa Postal 569
Luanda Angola
Tel: +244 - 222- 338596 or 335936
Fax: +244- 222- 390529 or 339356
AFS: FNLUYAYX
Email: inavic2@snet.co.ao , inavic@snet.co.ao
Telegraphic adress: Aeronautica Luanda.

2 Meteorology

Postal address:

Instituto Nacional de Hidrometeorologia de Angola
Caixa Postal 1228 C / Luanda-Angola
Tel: +244 - 222- 391048 or 391098 or 351951
Fax: +244- 222 - 396726
Telex: 4107 AN
AFS: FNLUYMYX
Email: inamet@netangola.com

3 Customs

Postal address:

Direcção Nacional das Alfândegas
Rua Teresa Afonso nº 2 C.P 1254 Luanda /Angola
Tel: +244 - 222- 350577, 353836 or 399490
Fax: +244 - 222- 339490-357853
Telex:
AFS: NIL
Email: comunicacoes@alfandegas.com

4 Immigration

Postal address:

Serviço de Migração e Estrangeiros (SME)
Calçada dos Enforcados Rua da Misericórdia nº2
Luanda – Angola
Tel: +244 - 222- 691001
Fax:
Telex: AFS:
Email: smevisa@yahoo.com.br

5 HEALTH

Postal address:

Direcção Nacional de Saúde Pública
Rua 1º Congresso do MPLA nº1 / Luanda Angola
Tel: +244 – 222 - 335335
Fax:
Telex:
AFS: NIL
Email:

6 EN-ROUTE AND AERODROME/HELIPORT CHARGES

Postal address:

Empresa Nacional de Exploração de Aeroportos e Navegação Aérea, ENANA-EP
Rua 21 de Janeiro, Aeroporto 4 de Fevereiro
C.P.841 /Luanda – Angola
Tel: +244 - 222- 350678
Fax: +244-222- 350678
Telex: 3015 ENANA DG AN
AFS: FNLUYEYX
Email:

7 AGRICULTURAL QUARANTINE

Postal address:

Direcção Provincial de Agricultura e Desenvolvimento Rural
Luanda – Angola
Rua Rui de Sousa nº 17 1º andar
Tel: +244 222 392493-392443
Fax:
Telex:
AFS:
Email:

8 AIRCRAFT ACCIDENTS INVESTIGATION

Postal address:

Ministério dos Transportes
Gabinete de Prevenção e Investigação de Acidentes Aeronáuticos
Caixa Postal 569
Luanda – Angola
Tel: +244 – 912514939 or 923330405
Fax: +244- 222 - 390529 or 339356
AFS: FNLUYAYX
Email: luís.solo@inavic_gv.ao / l_solo@hotmail.com

GEN 1.2 ENTRY, TRANSIT AND DEPARTURE OF AIRCRAFT

1. GENERAL

1.1 International flights into, from or over Angola territory shall be subject to the current Angola regulations relating to civil aviation. These regulations correspond in all essentials to the Standards and Recommended Practices contained in Annex 9 to the Convention on International Civil Aviation.

1.2 Aircraft flying into or departing from Angola territory shall make their first landing at, or final departure from, an international aerodrome (See AD 2-FNLU, AD 2-FNUB).

1.3 To use any of the aerodromes in Angola the user must first obtain prior authorisation from the Civil Aviation Authority. (See GEN 1.1-1).

1.4 Aircraft shall arrive or depart within the time limits of operations of air traffic services and aerodrome facilities indicated in the AIP (See AD 2)

1.5 In exceptional circumstances, aerodromes not indicated as international can be used for international flights through previous authorization from Angola Civil Aviation Authority since that the destination or departure aerodrome complies with the customs, health and immigration formalities.

2 Scheduled flights

2.1 General

For regular international flights operated by foreign airlines into, or in transit across Angola, the following requirements must be met:

a) The airline must have been designated persuant to a bilateral or multilateral agreement signed by Angola and the State in which the airline is registered.
b) The airlines permitted to operate into, from or in transit across Angola should notify in time the Civil Aviation Authority about their intended scheduled flights or alteration of them.

Application for such permits shall be submitted to the following address:

Postal address:

Instituto Nacional da Aviação Civil
Caixa Postal 569
Luanda Angola
Tel:244 - 222- 338596 or 335936
Fax:244 - 222- 390529 or 339356
Telex:99 1234
AFS:FNLUYAYX
Email: inavic2@snet.co.ao

2.2 Documentary requirements for clearance of aircraft

It's necessary that the under mentioned documents be submitted by operator for clearance on entry and departure of their aircraft to and from Angola. All documents listed bellow must follow the ICAO standard format as set forth in the relevant appendices to *Annex 9* and are acceptable when furnished in English or French and completed in print or legible handwriting.

2.3 Aircraft documents required (arrival/departure)

Required by	General declaration	Passenger manifest	Cargo manifest
Customs	NIL	NIL	1
Immigration	NIL	1	1
Health	NIL	NIL	NIL

Remarks

1. One copy of General Declaration from is endorsed and returned by Customs signifying clearance.
2. If no passengers are embarking or disembarking and no articles are loaded or (unloaded), no documents other than copies of the General Declaration form need to be submitted to the above authorities.

3 Non scheduled Flights

3.1 Procedures

3.1.1 If an operator intends to perform a (series of) non-scheduled flights into Angola for the purpose of taking on or discharging passengers, cargo or mail, it is necessary for the operator to apply to Civil Aviation Authority (See address in (GEN 1.2-2) for permission to carry out such operations.

3.1.2 The applications must reach the Civil Aviation Authority not less than three (72 hours) days of the intended date of operation.

3.1.3 The applications to perform such flights must include the following information in the order shown hereunder:

a) Name of operator/owner of aircraft; (Complete postal and telegraphic address)
b) Type of aircraft, registration of aircraft and call sign, if different from the registration;
c) Point of departure and destination;
d) Date and time of arrival at and departure from the airport concerned;
e) Purpose of flight and number of passengers and/ or description and weight of cargo;
f) Point of entry into Angola FIR;
g) Point of exit into Angola FIR;
h) The colour(s) of aircraft;
i) Date and time of arrival at, and departure from Angola.

3.1.4 The right to over fly does not rule out the obligation of the aircraft to land at any point whenever the authorities may require landing.

3.1.5 All international flights of Angola territory shall be conducted through the ATS routes network.

3.1.6 Details of the request are those of the ICAO Flight plan (Single or repetitive).

3.1.7 In special circumstances, other details may be requested. Besides the details in paragraphs *3.1.3* and 3.1.4, the following information shall be inserted in item 18 of ICAO Flight plan:

a) Over flight of scheduled and non-scheduled over flights:

- Complete postal and telegraphic address of operator or owner of the aircraft;
- Type of aircraft, registration of aircraft and call sign, if different from the registration;
- Colour (s) and nationality of aircraft;
- Number of crew and passenger (s);
- Date and time of arrival at, and departure from Luanda FIR.
- Purpose of flight.

b) Landing of non-scheduled flights:

- Complete postal and telegraphic address of operator or owner of the aircraft;
- Type of aircraft, registration of aircraft and call sign, if different from the registration.

3.2 Aircraft Documents Required (Arrival/Departure)

Documentary requirements for clearance of aircraft are the same as for Scheduled flights (See GEN 1.2-2.3)

4 Private flights

The right to overfly and to make stops in the course of private pleasure flights, flights for the purpose of meeting, emergency or humanitarian needs, and business flights carried out for any purpose other then for the profit through the operation of air transport services or other flying activities, shall be exercised in accordance with the provisions set forth in paragraphs GEN 1.2-3.1.1 or GEN 1.2-3.1.3, subject to the application of the procedure established to the granting of privileges pertaining to the trip tic system.

4.1 Refuelling Guarantee

Operators or owners of aircraft engaged in international flights shall obtain directly from the supplying company refuelling guarantee in the following cases:

a) Scheduled flights when changing aircraft type in relation to the approved timetable.
b) Non-scheduled flights.
c) Flights supplementary to scheduled international air services.

5 Public health measures applicable to aircraft.

5.1 Disinfection of aircraft

Disinfections requirements for the Government of Angola, when required as public health measures should meet the methods and the recommendations laid down in the International Health Regulations WHO expert Committee on insecticides in order:

a) To prevent the spread of specific vector borne diseases such as yellow fever, malaria, dengue fever, hemorrhagic fever, mosquito-borne encephalitis and others.
b) To prevent the re-introduction of mosquitoes where they have been eradicated.
c) To prevent the spread of introduction of mosquitos which have become resistant to standard insecticides in association with international air traffic. Until such a time that ports and cargoes are totally free of insect vectors and others vermin effective inspection of disinfection of aircraft may be required by the Angola Health Authority.

5.2 Acceptable methods of disinfection.

1) Outgoing aircraft

Disinfection before take off: When disinfection is required all aircraft leaving Angola will be properly sprayed by means of automatic or and operated aerosol of standard strength and formula particularly into those portions of the aircraft which could not basically be reached. All possible mosquito sheltering places such as flight deck, cargo holds, wheels and others external apertures shall be sprayed by the Quarantine. Officers assigned at the international airport. Airlines, however, shall not disinfect the aircraft while flying, or in any case while passengers are still in the aircraft.

2) Incoming aircraft

Operating airlines shall not disinfect their respective aircraft, while the aircraft is in flight but as soon as possible after landing when all passengers have disembarked from the aircraft and at least 30 minutes prior to the time of departure. Baggage compartment and others that could not be easily reached, however, may be sprayed as near as possible to the time of the aircraft's last departure.

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GEN 1.3 ENTRY, TRANSIT AND DEPARTURE OF PASSENGERS AND CREW

1. Customs requirements

All baggages and articles belonging to embarking and disembarking passengers and crew will be examined by Customs on arrival and departure.

2. Immigration requirements

2.1 General

2.1.1 No travel documents or visas are required from passengers arriving and departing on the same flight or transferring to another flight at the same airport, on the same day.

2.1.2 Passengers are required to complete Embarkation/Disembarkation card on entry to or exit from Angola in legible Roman type characters.

2.2 Entry to or exit from Angola

2.2.1 Requirements

No foreigner shall enter Angola unless the following requirements are cumulatively met:

- holder of a valid passport with a duration longer than the authorised permanence;
- holder of a valid visa;
- not subjected to any entry restriction.

2.2.2 Exemptions

The following citizens are exempted to possess passports:

a) citizens from countries with which Angola has agreements which permit them entry into Angola with an identity card or equivalent document;
b) holders of Laissez-passer issued by the authorities of the State from which they are citizens or where they usually reside, as well as issued by any international organization of which Angola is member;
c) holders of crew license certificate in accordance with the Convention of the International Work Organization, if only travelling on duty;
d) foreigners holding a residence authorization duly up-dated are exempted from entry visa as well.

2.2.3 Guarantee of daily allowances

For the purposed of entry and permanence in the Angola territory, the foreigner should be in possession of a minimum amount of USD 100 (one Hundred U.S Dollars) or equivalent in another convertible currency per diem and " per capita ".

The amount referred to in the above paragraph may be disregarded, provided that the foreigner demonstrates, through an appropriate document, that their expenses concerning food and accommodation are guaranteed.

2.3 Prohibition of entry

Entry is prohibited to foreigners registered in the national list of undesirable individuals, which:

a) have been driven out from Angola for the last 3 years;
b) have been sentenced to jail with a major penalty;
c) Present strong clues, which constitute a threat to internal order or national security.
d) Are subjected to international judge's order

2.4 Responsibilities of airline operators

2.4.1 The operator of a carrier carrying any foreigner who intends to enter Angola shall ensure that the entry of such foreigner complies with the requirements as indicated in paragraph GEN 1.3-2.2.1 above.

2.4.2 The operator of a carrier carrying any foreigner who intends to enter Angola shall be responsible for ensuring that such foreigner lands at designated airport of entry.

2.4.3 The operator of a carrier who fails to comply with the requirements of paragraphs GEN 1.3-2.4.1 and

2.4.4 GEN 1.3-2.4.2 above shall be hold responsible at his own expense, for the removal out of Angola of such foreigner

2.4.5 The operator of a carrier carrying persons into or out of Angola shall upon arrival at and prior to departure from the airport of entry, submit to the Immigration Authorities a list of all persons being carried into or out of Angola.

2.5 Penalty provision

2.5.1 The operator of a carrier which brings into or out of Angola:

a) Passengers known to be in violation of any provisions hereof or against any national regulation, or
b) fails to provide a complete and true list of all passengers brought into or carried out of Angola, or
c) foreigners covered by the provisions of paragraph GEN 1.3-2.2.1

2.6 Type and issuance of visa

2.6.1 Visas shall be issued to foreigner as follows

a) Diplomatic visa;
b) Official visa and;
c) Consular visa.

2.6.2 Diplomatic and official visas

a) Angolan diplomatic missions and consulates abroad issue diplomatic and official visas to holders of diplomatic or service passports.
b) The visas referred to by the previous paragraph of this Article should be used within 60 (sixty) days from the date of issuance. These visas permit a permanence of 30 (thirty) days and they are valid for 1 (one) or 2 (two) entries.

2.6.3 Consular visas may be as follows:

a) Transit visa;
b) Short duration visa;
c) Ordinary visa;
d) Business visa;
e) Residence visa.

2.6.3.1 Transit visa

a) Transit visa is issued by Angolan consulates to foreigners who, in order to reach the country destination have to disembark in Angola.
b) Transit visa is valid for a period of 5 days and upon request can be extended for an equal period and is valid for one entry.
c) A transit visa should be used within 15 (fifteen) days from the date of issuance.
d) The issuance of transit visa to passenger or crew member that for imperious reason are compelled to break their journey into Angola is the responsibility of the Immigration Authority.

2.6.3.2 Visa of short duration

a) Visa of short duration is issued by the “Serviços de Migração e Estrangeiros” through borders posts and allows the entry into Angola to a foreigner citizen who, for unforeseen reasons, could not apply for the respective entry visa from the competent consulates.
b) Visa of short duration is valid for one entry and entitles its holder to permanence in Angola for a period of 15 (fifteen) days.

2.6.3.3 Ordinary visa

a) Angolan consulates issue ordinary visa to foreigners who, for family, cultural, journey, scientific, business, tourist or other reasons not mentioned in paragraphs GEN 1.3-2.6.1 and GEN 1.3-2.6.2.
b) Ordinary visa is valid for one or two entries and entitles the holder to a permanence of not longer than 30 (thirty) days in Angola. Ordinary visa should be used 60 (sixty) days from the date of issuance.

2.6.3.4 Business visa

a) Business visa is issued by Angolan consulates and entitles its holder to a permanence of a period of 1 (one) year in Angola, in order to exercise a professional activity in a public or private interest. This period can be extended for equal period until the end of the individual business contract.
b) Business visa entitles only its holder to exercise the professional activity for which the visa was issued.
c) Business visa is for multiple entries and should be used within 60 (sixty) days from the date of issuance.

2.6.3.5 Issuance of business visa

a) A business visa issued to an individual to exercise any professional activity for the Government shall only be issued after duly authorization of the "Serviço de Migração e Estrangeiros" after an agreement of the "Ministério da Administração Pública e Segurança Social" having been requested to do so by the ministry to which the individual will work for.
b) A business visa issued to an individual to exercise
c) The "Ministério da Administração Pública e Segurança Social" or the ministry mentioned above shall not issue an agreement whenever any of the following situations occurs:

- The enterprise does not fulfil its obligations to the finance authorities;
- The existing unemployment national citizens on that professional activity;
- The absence of qualification and other legal requirements by the applicant;
- The absence of authenticity in the employment offer addressed to the applicant;
- The absence by the applicant of a licence to exercise the professional activity;
- The employing authority does not comply with exiting obligation related to the employment of national citizen for that particular professional activity.

2.6.3.6 Guarantee

a) The issuance of a business visa is subject to the payment of a guarantee in a convertible currency, to permit an eventual repatriation of the applicant.
b) The guarantee above mentioned consists in the deposit, in a convertible currency, of an amount equivalent of the price of the ticket for the return trip to the home country or country origin.
c) The guarantee will be kept in a deposit to National Bank (BNA) by order of "Serviço de Migração e Estrangeiros"
d) This guarantee will be returned to the applicant as soon as he decided to voluntarily leave the Angolan territory, if requested by at least 15 (Fifteen) days in advance of the date of departure.

2.6.3.7 Residence visa

a) Residence visa is issued to foreigner pretending to reside in Angola.
b) Authorization for the issue of residence visa is exclusive competence of the "Serviço de Migração e Estrangeiros"
c) Residence visa should be used within 60 (Sixty) days from the date of issue

2.6.3.8 Departure of foreigner

a) The departure of the foreigners from Angola shall be carried out by any qualified border post trough previous show of a valid passport.

2.6.3.9 Emergency travel document

a) Emergency travel documents may be issued for the purposes of driving out from Angola any foreigner without the required documents or in violation of the applicable laws.
b) The issue of an Emergency travel document is responsibility of the "Serviço de Migração e Estrangeiros"

2.6.3.10 Exemptions

The following foreign citizens are exempted from entry visas:

a) Nationals from the Portuguese speaking countries community, holding a valid service or diplomatic passports
b) Nationals from Russia, Cuba and SADC countries, holding a valid service or diplomatic passports
c) Holders of valid residence authorizations when returning to Angola.

GEN 1.4 ENTRY, TRANSIT AND DEPARTURE OF CARGO

1.1 Customs requirements concerning cargo and other articles

1.1.1 The following documents are required for the clearance of goods through Customs:

a) Cargo Manifest;
b) Airway bill; and
c) If carrying live animals, plants, perishable or foodstuff, sanitary certificate and/or related documents.

1.1.2 Where cargo is transshipped from one flight to another flight at same airport, one copy of the cargo manifest shall be provided to Customs.

1.1.3 No clearance documents are required with respect to goods returned on board an aircraft for carriage to a destination out-side Angola.

1.1.4 Upon exportation the following documents are required for the clearance of shipments to be exported by air:

- Cargo manifest;
- Airway bill;
- Export licence (as applicable);
- Certificate of health (Veterinary).

1.2 Customs requirements

1.2.1 Passengers arriving at the Republic of Angola are allowed to import free of customs duty and tax, in their accompanied baggage:

- 400 cigarettes or 500 grams of tobacco or 500 grams of cigars:
- 1 litre of wine;
- 1 litre of spirit;
- 250 ml of eau de toilette or after shave or similar products;
- 50 ml of perfume

1.3 Other articles and goods in non commercial quantities:
Personal property of passengers such as used earing apparel, general items of personal nature, gifts or souvenir up to a total value of USD 500.
No person under the age of 18 is allowed to import cigarettes, tobacco products and alcoholic beverages.

1.4 Prohibited and restricted goods

1.4.1 Regulations concerning importation of prohibited or restricted goods are set out at Article 27 of the Customs tariff (Instruções preliminaries da pauta de Importação e Exportação, Table l) which includes, among others, the following items:

- Medicines and foodstuffs dangerous to health;
- Drugs and toxic substances in any form;
- Boxes and packages containing items of the same brand or type;
- Gaming machines;
- Pure alcohol denatured;
- Animals and any part of animals or animal products without the corresponding certificates
- Arms, ammunition or explosive materials ;
- Fiscal or postal stamps or valuables

1.4.2 Passengers caring goods in quantities in excess of the duty free allowances set out for the accompanied baggage, or caring prohibited or restricted items, or has any doubt about their baggage, must contact a Customs Officer on duty immediately and declare all such goods.

1.4.3 Penalties for failure to declare such goods may include fines and confiscation of the goods.

1.5 Exportation of Currency

1.5.1 It is prohibited to export any amount in national currency (Kwanza) for Angola nationals and residents. It is prohibited for Angola nationals and residents to export foreign currency in excess of USD 15,000 or its equivalent in another currency.

1.5.2 Non-residents

It is prohibited for non-residents to export foreign currency in excess of USD 15,000 or its equivalent in another currency, without the corresponding entry declaration

1.6 Importation of currency

1.6.1 Non-residents
Amounts of USD 5,000 or above, or its equivalent in another currency, must be declared to Customs at the point of entry. Failure to do so may result in the confiscation of the money.

2. Agriculture quarantine requirements

2.1 Regulation of Vegetal health

2.1.1 The import and transit in Angola of products specified hereunder shall be subject to the provisions of this Regulation, as well as to the instructions issued for their correct application by the "Direcção National da Agricultura e Florestas", through the "Departamento de Protecção de Plantas":

a) Plants or parts thereof, including material of vegetative propagation, fruits and seeds destinated for culture;
b) Ornamental or forest plants;
c) Agriculture, forest and other products which are possible vectors of parasites or infectious agents;
d) Live insects and other invertebrate animals in any stage of development, for industrial purposes or for use in biological fight against plagues of plants;
e) Vegetal materials for packing any of the above-mentioned articles.

2.1.2 The restriction referred to in this Requirements apply specifically and exclusively to products included and mentioned on lists to be issued by the "Departamento de Protecção de Plantas" of the "Direcção Nacional da Agricultura e Florestas ", as provided for in (GEN 1.4-1.4.1);

2.1.3 The entry of soils, sands, manures or compounds, which serve as a vehicle, or packing of plants, shall only be permitted when sterilized by the heat and under control of the competent services of the exporting country, which shall so state in the certificate of vegetal health.

2.1.4 The import of vegetal material from areas affected by plagues or diseases not registered in Angola shall be prohibited.

2.1.5 The import of any product referred to in previous GEN 1.4-1.4.1 requires compliance with the following formalities:

a) Import licence issued by the "Direcção Nacional da Agricultura e Florestas " which should establish the conditions to be complied with in the shipment with regard to the origin, certificates of vegetal health, recipients, Customs entry post and any others to be complied with by the owner of the nursery or supplier, before delivery of the goods to the carrier.
b) Presentation, in the Customs entry post, of the import licence and documents required therein, upon arrival of the goods;
c) Inspection of the shipment, upon arrival at the Customs post designated in the import licence, before the respective Customs clearance takes place;

2.1.6 The presentation by the importer of the certificates of vegetal health issued in the origin shall not prevent formalities of sanitary inspection upon entry of the product.

2.1.7 In cases where the product or the absence of documentation represent threatening for public health, the product will be destroyed without any right of compensation.

2.1.8 Previous import licence shall be valid for 1 (one) year for the product requested.

2.1.9 Whenever required, the appropriate sanitary authorities may impose quarantine measures to products entering Angola.

2.1.10 Transport of goods in international transit regime through Angola shall be subject to the applicable provisions of the legislation of vegetal health in force.

2.1.11 The appropriate health authorities shall publish lists of vegetables, and/or animal subjected to prohibition inside the Angolan territory.

GEN 1.5 AIRCRAFT INSTRUMENT, EQUIPMENT AND FLIGHT DOCUMENTS

1 General

Commercial air transport aircraft operating in Angola must adhere to the provisions of Angolan Aviation Safety Regulations.

2 Documents to be carried by all types of flights.

All aircraft engaged in national and international air navigation within Luanda FIR shall carry on board the following documents:

a) Certificate of Airworthiness;
b) Certificate of Registration;
c) Aeroplane Flight Manual;
d) Aircraft Operation Manual;
e) Operator Flight Procedure Manual;
f) Certificate of insurance;
g) Crew Member Licences;
h) Licence of Radio-Communication Station;
i) Load sheet Message;
j) Inflight Deficiencies Reporting;
k) Compas Swinging;
l) Passengers and/or Cargo Manifest.

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GEN 1.6 SUMMARY OF NATIONAL REGULATIONS AND INTERNATIONAL AGREEMENTS CONVENTIONS.

1 National regulations

The following table presents a list of civil aviation Norms in force in the Republic of Angola. All persons engaged in air operations must comply with relevant Norms . Copies of these documents may be obtained from the aeronautical information services headquarters.

REF Nº	TITLE	DATE OF PUBLICATION	CONTENT
	Decree 18/11	17Feb 2011	Decree of the Ministry of Transport promulgating the Angola Aviation Safety Regulation
1	Decree 1/08	16 Jan 2008	Civil Aviation Law
2	Decree 26/08	03Marc2008	The Technician implements Normative Aeronautical
3	Decree 159/08	07Aug2008	Penalty Regulation
4	Decree 78/08	22Sept2008	Organic Statute of the Angola Civil Aviation Authority
5	Decree 8/09	25Jun2009	Institutionalize the system of facilitation and Civil Aviation Safety
6	Decree 130/10	07Jun2010	The National Civil Aviation Safety
7	Decree 05/05	31Jan2005	Domestic Air Transport
8	Decree 31/09	23April 2009	Rules of the Authority
9	Decree 158/08	06Aug2008	Regulation of fees
10	Decree 9/09	30 Jun2009	Compulsory insurance of civil liability, aviation, air transport, aviation infrastructure and ancillary services
11	Decree 202/10	20 Sept2010	Regulation on Registration Aeronautical Angola

1 National regulations (cont.)

The following table presents a list of civil aviation Norms in force in the Republic of Angola. All persons engaged in air operations must comply with relevant Norms . Copies of these documents may be obtained from the aeronautical information services headquarters.

REF Nº	TITLE	DATE OF PUBLICATION	CONTENT
1	NTA 01	17 FEB 2011	General Policies, Procedures and Definitions
2	NTA 02	17 FEB 2011	Registration of Aircraft
3	NTA 03	17 FEB 2011	Air and Component Original Certification
4	NTA 04	17 FEB 2011	Continuing Airworthiness of Aircraft
5	NTA 05	17 FEB 2011	Approved Maintenance Organizations
6	NTA 06	17 FEB 2011	Instruments equipments
7	NTA 07	17 FEB 2011	Personnel License
8	NTA 08	17 FEB 2011	Medical Certification
9	NTA 10	17 FEB 2011	Aircrafts operations
10	NTA 12	17 FEB 2011	Air Operators Certification and Administration
11	NTA 13	17 FEB 2011	Transport of Passengers Requirements
12	NTA 14	17 FEB 2011	Qualification Aeronautical personnel
13	NTA 15	17 FEB 2011	Time Limits of services Aeronautical personnel
14	NTA 16	17 FEB 2011	Flighty Dispatch Requirement
15	NTA 17	17 FEB 2011	Cent rages Weight Performances

Note: **NTA –** Aeronautical Technical Norms

Copies of the documents may be obtained from the following address:

See GEN 1.1

2 INTERNATIONAL AGREEMENTS/CONVENTIONS.

The following table is list of International Conventions, treaties or other legal instruments to witch Angola has ratified and is bound for

REF Nº	TITLE	DATE OF RATIFICATION	UPDATE	REMARKS
1	Convention on International Civil Aviation (Chicago)	10April1977	31Dec2008	Date of deposit of the instruments of ratification
2	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 93bis	10April1977	31Dec2008	Date of deposit of the instruments of ratification
3	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 45	10April1977	31Dec2008	Date of deposit of the instruments of ratification
4	Relative protocol the certain amendment to the Accord on International Civil Aviation	10April1977	31Dec2008	Date of deposit of the instruments of ratification
5	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 50a	10April1977	31Dec2008	Date of deposit of the instruments of ratification
6	Relative protocol the Amendment for Convention on International Civil aviation (Roma) 48a	10April1977	31Dec2008	Date of deposit of the instruments of ratification
7	Relative protocol the Amendment for Convention on International Civil aviation (New York)Art. 50(a)	10April1977	31Dec2008	Date of deposit of the instruments of ratification
8	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 50a	10April1977	31Dec2008	Date of deposit of the instruments of ratification
9	Relative protocol the Amendment for Convention on International Civil aviation (Vienna) 56	10April1977	31Dec2008	30 March 2004, Last date attributed for the ICAO
10	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 50a	10April1977	31Dec2008	Date of deposit of the instruments of ratification
11	Relative protocol the Amendment for Convention on International Civil aviation (Montreal) 83bis	30Mar2004	31Dec2008	Date of deposit of the instruments of ratification
12	Relative protocol to the amendment of 3º Bis of the Article of the Convention of Chicago	30Mar2004	31Dec2008	Date of deposit of the instruments of ratification
13	Protocol for the Repression of illicit Acts of violence in the Airports that give services International Civil Aviation, to complement to the Convention for the Repression of Illicit Acts against the Security of Civil Aviation	30Mar2004	31Dec2008	Date of deposit of the instruments of ratification

REF Nº	TITLE	DATE OF RATIFICATION	UPDATE	REMARKS
14	Relative protocol to the amendment to the article 56º of the Convention on International Civil Aviation	30Mar2004	31Dec2008	Date of deposit of the instruments of ratification
15	Convention for the Unification of Certain Rules relating to International carriage by air (Warsaw 1929)	07April1997	31Dec2008	Date of deposit of the instruments of ratification
16	Convention for the Unification of certain rules relative to the Preventive Apprehension of Aircraft (Rome 1933)	07April1997	31Dec2008	Date of deposit of the instruments of ratification
17	Convention of Montreal for the Repression of Illicit Acts against the Security of Civil Aviation (1971)	31April1997	31Dec2008	Date of deposit of the instruments of ratification
18	Convention of Haia for the Suppression of Unlawful Seizure of aircraft (1970)	07April1997	31Dec2008	Date of deposit of the instruments of ratification
19	Convention on the International Recognition of Rights in aircraft, 1948 (Genève)	25MAY1998	31Dec2008	Date of deposit of the instruments of ratification
20	Relative convention to the actual damages to third in the surface for foreign Aircraft, 1952 (Rome)	25MAY1998	31Dec2008	Date of deposit of the instruments of ratification
21	International convention on interests in mobile equipment (Cape Town)	01AUG2006	31Dec2008	Date of deposit of the instruments of ratification
22	Protocol to the International Convention on interests in mobile equipment. (Cape Town)	01AUG2006	31Dec2008	Date of deposit of the instruments of ratification
23	Convention on certain infractions and other acts practiced on board Aircraft. (Tokyo 1963)	25MAY1998	31Dec2008	Date of deposit of the instruments of ratification

GEN 1.7 DIFERENCES FROM ICAO STANDARDS RECOMENDED PRATICES AND PROCEDURES

Annex 1 Personnel licensing: NIL

Annex 2 Rules of the Air: NIL

Annex 3 Metrological Service for International Air navigation: NIL

Annex 4 Aeronautical Charts: NIL

Annex 5 Units of measurement to be used in air and ground operations: NIL

Annex 6 Operations of Aircraft: NIL

Annex 7 Nationality of Aircraft: NIL

Annex 8 Airworthiness of Aircraft: NIL

Annex 9 Facilitation: NIL

Annex 10 Aeronautical Telecommunication: NIL

Annex 11 Air Traffic Services: NIL

Annex 12 Search and Rescue: NIL

Annex 13 Aircraft accident Investigation: NIL

Annex 14 Aerodromes: NIL

Annex 15 Aeronautical Information Services: NIL

Annex 16 Environnement Protection: NIL

Annex 17 Security-Safeguarding International Civil Aviation against acts of unlawful interference: NIL

Annex 18 The safe transport of dangerous goods by air: NIL

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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 Station within Luanda 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 aerodromes (e.g. runway lengths).	Meters
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	Kilometers or meters
Altimeter setting	Hectopascal
Temperature	Degrees Celsius
Weight	Metric tonnes or Kilogrammes
Time	Hours and minutes, beginning at midnight UTC

2 Time System

General Coordinated Universal Time (UTC) is used by air navigation services and publication issued by the Aeronautical information service. Reporting of time is expressed to the nearest minute, e.g 12:40:35 is reported as 12:41.

Local time in Angola is UTC plus one hour.

3 Geodetic reference datum

3.1 Name/designation of datum

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 Angola as well as the airspace over the high seas encompassed by the Luanda Flight Information Region in accordance with the regional air navigation agreement.

3.3 Use of an asterisk to identify published geographical coordinates

An asterisk (*) will be used to identify those published geographical coordinates which have not been transformed into WGS-84 geodetic reference datum.

4 AIRCRAFT NATIONALITY AND REGISTRATION MARKS

The nationality mark for aircraft registered in Angola is D2. The nationality mark is followed by a hyphen and a registration mark consisting of 3 letters, e.g. D2-LPD

5 PUBLIC HOLIDAYS

Every year, the following dates will be considered as legal holidays in Angola:

1 January	New Year's Day~
4 January	Cassanje Martyrs' Day
4 February	Beginning of Armed Struggle
8 March	International Women's day
4 April	Peace and national reconciliation Day
1 May	International Labor - Day
25 May	African Commemoration Day
1 June	International children's day
17 September	National Hero's Day
2 November	All Saints Day
11 November	National Independence Day
25 December	Christians Day
Good Friday, Easter and Carnival are also public holidays.	

GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

Abbreviations marked by an asterisk (*) are either different from or not contained in ICAO Doc 8400

A	
A	Amber
A/A	Air-to-air
A/G	Air-to-ground
AAA	(or AAB, AAC...etc., in sequence) Amended meteorological message (message type designator)
AAL	Above aerodrome level
ABM	Abeam
ABN	Aerodrome beacon
ABT	About
ABV	Above
AC	Altocumulus
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	Active or activated or activity
AD	Aerodrome
ADA	Advisory area
ADDN	Addition or additional
ADF	Automatic direction finding equipment
ADIZ	(to be pronounced "AY-DIZ") Air defence identification zone
ADJ	Adjacent
ADR	Advisory route
ADS	Automatic dependent surveillance
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
AGA	Aerodrome, air routes and ground aids
AGL	Above ground level
AGN	Again
AIC	Aeronautical information circular
AIP	Aeronautical information publication
AIRAC	Aeronautical information regulation and control
AIREP	Air-report
AIRMET	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations
AIS	Aeronautical information services
ALERFA	Alert phase
ALR	Alerting (message type designator)
ALRS	Alerting service
ALS	Approach lighting system
ALT	Altitude
ALTN	Alternate or alternating (light alternates in colour)
ALTN	Alternate (aerodrome)

AMA	Area minimum altitude
AMD	Amend or amended (used to indicate amended meteorological message; message type designator)
AMDT	Amendment (AIP amendment)
AMS	Aeronautical mobile service
AMSL	Above mean sea level
AMSS	Aerodrome mobile satellite service
ANS	Answer
AOC	Aerodrome obstacle chart
AP	Airport
APCH	Approach
APP	Approach control office or approach control or approach control service
APR	April
APRX	Approximate or approximately
APSG	After passing
APU*	Auxiliary power unit
APV	Approve or approved or approval
ARFOR	Area forecast (in aeronautical meteorological code)
ARNG	Arrange
ARO	Air traffic services reporting office
ARP	Aerodrome reference point
ARP	Air-report (message type designator)
ARQ	Automatic error correction
ARR	Arrive or arrival
ARR	Arrival (message type designator)
ARS	Special air-report (message type designator)
ARST	Arresting (specify (part of) aircraft arresting equipment)
AS	Altostratus
ASC	Ascent to or ascending to
ASDA	Accelerate stop distance available
ASPH	Asphalt
AT...	At (followed by time at which weather change is forecast to occur)
ATA	Actual time of arrival
ATC	Air traffic control (in general)
ATD	Actual time of departure
ATFM	Air traffic flow management
ATIS	Automatic terminal information service
ATM	Air traffic management
ATN	Aeronautical telecommunication network
ATP	At...(time or place)
ATS	Air traffic services
ATTN	Attention
ATZ	Aerodrome traffic zone
AUG	August
AUTH	Authorized or authorization
AUW	All up weight
AUX	Auxiliary
AVASIS	Abbreviated visual approach slope indicator system
AVBL	Available or availability
AVG	Average
AVGAS	Aviation gasoline
AWTA	Advise at what time able
AWY	Airway
AZM	Azimuth
B	
B	Blue
BASE	Cloud base
BCFG	Fog patches
BCN	Beacon (aeronautical ground light)
BCST	Broadcast
BDRY	Boundary
BFNMG	Becoming

BA	Braking action
BFR	Before
BKN	Broken
BL...	Blowing (followed by DU= dust, SA= sand or SN= snow)
BLDG	Building
BLO	Below clouds
BLW	Below ...
BOMB	Bombing
BR	Mist
BRF	Short (used to indicate the type of approach desired or required)
BRG	Bearing
BRKG	Breaking
BS	Commercial broadcasting station
BTL	Between layers
BTN	Between
C	
C	Centre (runway identification)
C	Degrees celsius (Centigrade)
CAT	Category
CAT	Clear air turbulence
CAVOK	(to be pronounced "KAV-OH-KAY") visibility, cloud and present weather better than prescribed values or conditions
CB	(to be pronounced "CEE BEE") Cumulonimbus
CC	Cirrocumulus
CCA	(or CCB, CCC....etc.. in sequence) corrected meteorological message (message type designator)
CD	Candela
CDN	Co-ordination (message type designator)
CDR	Conditional route (followed by a number)
CF	Change frequency to ...
CGL	Circling guidance light(s)
CH	Channel
CHG	Modification (message type designator)
CI	Cirrus
CIDIN	Common ICAO data interchange network
CIT	Near or over large towns
CIV	Civil
CK	Check
CL	Centre line
CLBR	Calibration
CLD	Cloud
CLG	Calling
CLR	Clear(s) or cleared to ... or clearance
CLSD	Close or closed or complete
CM	Centimetre
CMB	Climb to or climbing to
CMPL	Completion or completed or complete
CNL	Cancel or cancelled
CNL	Flight plan cancellation message (message type designator)
CNS	Communication, navigation and surveillance
COM	Communications
CONC	Concrete
COND	Condition
CONS	Continuous
CONST	Construction or constructed
CONT	Continue or continued
COOR	Co-ordinate or coordination
COP	Change over point
COR	Correct or correction or corrected (used to indicate corrected meteorological message; message type designator)
COT	At the coast
COV	Cover or covered or covering
CPL	Current flight plan (message type designator)
CRZ	Cruise

CS	Cirrostratus
CTA	Control area
CTAM	Climb to and maintain
CTC	Contact
CTL	Control
CTN	Caution
CTR	Control zone
CU	Cumulus
CUF	Cumuliform
CW	Continuous wave
CWY	Clearway
D	
D	Downward (tendency in RVR during previous 10 minutes)
D ...	Danger area (followed by identification)
DA	Decision altitude
DCD	Double channel duplex
DCKG	Docking
DCS	Double channel simplex
DCT	Direct (in relation to flight plan clearances and type of approach)
DE	From (used to preced the call sign of the calling station)
DEC	December
DEG	Degrees
DENEB*	Fog dispersal operations
DEP	Depart or departure
DEP	Departure (message type designator)
DES	Descend to or descending to
DEST	Destination
DETRESFA	Distress phase
DEV	Deviation or deviating
DFTI	Distances from touch down indicator
DH	Decision height
DIF	Diffuse
DIST	Distance
DIV	Divert or diverting
DLA	Delay (message type designator)
DLA	Delay or delayed
DME	Distance measuring equipment
DNG	Danger or dangerous
DOM	Domestic
DP	Dew point temperature
DPT	Depth
DR	Dead reckoning
DR ...	Low drifting (followed by DU= dust, SA= sand or SN = snow)
DRG	During
DS	Duststorm
DSB	Double sideband
DTAM	Descend to and maintain
DTG	Date-time group
DTRT	Deteriorate or deteriorating
DTW	Dual tandem wheels
DU	Dust
DUC	Dense upper cloud
DUR	Duration
DVOR	Doppler VOR
DW	Dual wheels
DZ	Drizzle
E	
E	East or eastern longitude
eAIP	Electronic Aeronautical Information Publication
EAT	Expected approach time

EB	Eastbound
EET	Estimated elapsed time
EFC	Expect further clearance
EHF	Extremely high frequency (30 000 to 300 000 MHz)
ELBA	Emergency location beacon - aircraft
ELEV	Elevation
ELR	Extra long range
ELT	Emergency locator transmitter
EM	Emission
EMBD	Embedded in a layer (to indicate cumulonimbus embedded in layers of other clouds)
EMERG	Emergency
EN*	English
ENANA	Empresa Nacional de Exploraçâo de Aeroportos e Navegaçâo Aèrea
END	Stop-end (related to RVR)
ENE	East north east
ENG	Engine
ENRT	En route
EOBT	Estimated off-block time
EQPT	Equipment
ER	Here...or herewith
ESE	East south east
EST	Estimate or estimated or estimate (as message type designator)
ETA	Estimated time of arrival or estimating arrival
ETD	Estimated time of departure or estimating departure
ETO	Estimated time over significant point
EV	Every
EXC	Except
EXER	Exercises or exercising or to exercise
EXP	Expect or expected or expecting
EXTD	Extend or extending
F	
F	Fixed
FAC	Facilities
FAF	Final approach fix
FAL	Facilitation of international air transport
FAP	Final approach point
F	Fixed
FAC	Facilities
FAF	Final approach fix
FC	Funnel cloud (tornado or water spout)
FCT	Friction coefficient
FEB	February
FEW	Few
FG	Fog
FIC	Flight information centre
FIR	Flight information region
FIS	Flight information service
FISA	Automated flight information service
FL	Flight level
FLD	Field
FLG	Flashing
FLR	Flares
FLT	Flight
FLTCK	Flight check
FLUC	Fluctuating or fluctuation or fluctuated
FLW	Follow(s) or following
FLY	Fly or flying
FM	From
FM ...	From (followed by time weather change is forecast to begin)
FMU	Flow management unit
FNA	Final approach
FPL	Filed flight plan (message type designator)

FPM	Feet per minute
FPR	Flight plan route
FR	Fuel remaining
FREQ	Frequency
FRI	Friday
FRNG	Firing
FRONT	Front (relating to weather)
FRQ	Frequent
FSL	Full stop landing
FSS	Flight service station
FST	First
FT	Feet (dimensional unit)
FU	Smoke
FZ	Freezing
FZDZ	Freezing drizzle
FZFG	Freezing fog
FZRA	Freezing rain
G	
G	Green
G/A	Ground-to-air
G/A/G	Ground-to-air and air-to-ground
GAMET	Area forecast for low-level operations
GCA	Ground controlled approach system or ground controlled approach
GEN	General
GEO	Geographic or true
GES	Ground earth station
GLD	Glider
GND	Ground
GNDCK	
H	
H24	Continuous day and night service
HAPI	Helicopter approach path indicator
HBN	Hazard beacon
HDF	High frequency direction-finding station
HDG	Heading
HEL	Helicopter
HF	High frequency (3 000 to 30 000 kHz)
HGT	height or height above
HJ	Sunrise to sunset
HLDG	Holding
HN	Sunset to sunrise
HGT	height or height above
HO	Service available to meet operational requirements
HOL	Holiday
HOSP	Hospital aircraft
HPA	Hectopascal
HR	Hours
HS	Service available during hours of scheduled operations
HURCN	Hurricane
HVDF	High and very high frequency direction finding stations (at the same location)
HVY	Heavy
HVY	Heavy (used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain)
HX	No specific working hours
HYR	Higher
HZ	Haze
HZ	Hertz (cycle per second)
I	
IAC	Instrument approach chart
IAF	Initial approach fix
IAO	In and out of clouds
IAR	Intersection of air routes

IAS	Indicated air speed
IBN	Identification beacon
IC	Diamond dust (very small ice crystals in suspension, also known as diamond dust)
ICE	Icing
ID	Identifier or identify
IDENT	Identification
IF	Intermediate approach fix
IFF	Identification friend/foe
IFR	Instrument flight rules
IGA	International general aviation
ILS	Instrument landing system
IM	Inner marker
IMC	Instrument meteorological conditions
IMG	Immigration
IMPR	Improve or improving
IMT	Immediate or immediately
INA	Initial approach
INBD	Inbound
INC	In cloud
INCERFA	Uncertainty phase
INFO	Information
INOP	Inoperative
INP	If not possible
INPR	In progress
INS	Inertial navigation system
*INAVIC	Instituto Nacional da Aviação Civil (Angolan CAA)
INSTL	Install or installed or installation
INSTR	Instrument
INT	Intersection
INTL	International
INTRG	Interrogator
INTRP	Interrupt or interruption or interrupted
INTSF	intensify or intensifying
INTST	Intensity
IR	Ice on runway
ISA	International standard atmosphere
ISB	Independent sideband
ISOL	Isolated
J	
JAN	January
JTST	Jet stream
JUL	July
JUN	June
K	
KG	Kilograms
KHZ	Kilohertz
KM	Kilometres
KMH	Kilometres per hour
KPA	Kilopascal
KT	Knots
KW	Kilowatts
L	
L	Left (runway identification)
L	Locator (see LM, LO)
LAM	Logical acknowledgement (message type designator)
LAN	Inland
LAT	Latitude
LCN*	Load Classification Number
LDA	Landing distance available
LDAH	Landing distance available, helicopter
LDG	Landing
LDI	Landing direction indicator

LEN	Length
LF	Low frequency (30 to 300 kHz)
LGT	Light or lighting
LGTD	Lighted
LIH	Light intensity high
LIL	Light intensity low
LIM	Light intensity medium
LLZ	Localizer
LM	Locator middle
LMT	Local mean time
LNG	Long (used to indicate the type of approach desired or required)
LO	Locator, outer
LOC	Local or locally or location or located
LONG	Longitude
LORAN	Loran (long range air navigation system)
LRG	Long range
LSQ	Line Squall
LTD	Limited
LTT	Landline teletypewriter
LV	Light and variable (relating to wind)
LVE	Leave or leaving
LVL	Level
LYR	Layer or layered
LYR	Layer or layered
M	
M	Mach number (followed by figures)
M	Metres (preceded by figures)
m*	Nautical mile (preceded by figures)
MAA	Maximum authorized altitude
MAG	Magnetic
MAINT	Maintenance
MAP	Aeronautical maps and charts
MAPT	Missed approach point
MAR	March
MAR	At sea
MAS	Manual A1 simplex
MAX	Maximum
MAY	May
MBST	Microburst
MCA	Minimum crossing altitude
MCW	Modulated continuous wave
MDA	Minimum descent altitude
MDF	Medium frequency direction-finding station
MDH	Minimum descent height
MEA	Minimum en-route altitude
MEHT	Minimum eye height over threshold (for visual approach slope indicator system)
MET	Meteorological or meteorology
METAR	Aviation routine weather report (in aeronautical meteorological code)
MF	Medium frequency (300 kHz to 3 000 kHz)
MHDF	Medium and high frequency direction-finding station (at the same location)
MHVDF	Medium, high and very high frequency direction-finding station (at the same location)
MHZ	Megahertz
MID	Mid-point (related to RVR)
MIFG	Shallow fog
MIL	Military
MIN	Minutes
MKR	Marker radio beacon
MLS	Microwave landing system
MM	Middle marker
MNM	Minimum
MNPS	Minimum navigation performance specifications

MNT	Monitor or monitoring or monitored
MNTN	Maintain
MOA	Military operating area
MOC	Minimum obstacle clearance (required)
MOD	moderate (used to indicate the intensity of weather phenomena, interference or static reports e.g. MOD RA = moderate rain)
MON	Above mountains
MON	Monday
MOTNE	Meteorological Operational Telecommunications Network Europe
MOV	Move or moving or movement
MPS	Metres per second
MRA	Minimum reception altitude
MRG	Medium range
MRP	ATS/MET reporting point
MS	Minus
MSA	Minimum sector altitude
MSG	Message
MSL	Mean sea level
MT	Mountain
MTU	Metric units
MTW	Mountain waves
MVDF	Medium and very high frequency direction-finding station (at the same location)
MWO	Meteorological watch office
MX	Mixed type of ice formation (white and clear)
N	
N	North or northern latitude
N	No distinct tendency (in RVR during previous 10 minutes)
NAT	North atlantic
NAV	Navigation
NB	North bound
NBFR	Not before
NC	No change
NDB	Non-directional radio beacon
NE	North-east
NEB	North-eastbound
NEG	No or negative or permission not granted or that is not correct
NGT	Night
NIL	None or 1 have nothing to send to you
NM	Nautical miles
NML	Normal
NNE	North north east
NNW	North north west
NOF	International NOTAM office
NOSIG	No significant change (used in trend-type landing forecasts)
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
NOV	November
NR	Number
NRH	No reply heard
NS	Nimbostratus
NSC	Nil significant cloud
NSW	Nil significant weather
NW	North-west
NWB	North-westbound
NXT	Next
O	
O/R	On request
OAC	Oceanic area control centre

OAS	Obstacle assessment surface
OBS	Observe or observed or observation
OBSC	Observe or obscured or obscuring
OBST	Obstacle
OCA	Obstacle clearance altitude
OCA	Oceanic control area
OCC	Occulting (light)
OCH	Obstacle clearance height
OCNL	Occasional or occasionally
OCS	Obstacle clearance surface
OCT	October
OFF*	Obstacle Free Flight
OHD	Overhead
OM	Out marker
OPA	Opaque, white type of ice formation
OPC	The control indicated is operational control
OPMET	Operational meteorological (information)
OPN	Open or opening or opened
OPR	Operator or operate or operative or operating or operational
OPS	Operations
ORD	Indication of an order
OSV	Ocean station vessel
OTLK	Outlook (used in SIGMET message for volcanic ash and tropical cyclones)
OTP	On top
OTS	Organized track system
OUBD	Out-bound
OVC	Overcast
P	
P ...	Prohibited area (followed by identification)
PALS	Precision approach lighting system (specify category)
PANS	Procedures for air navigation services
PAPI	Precision approach path indicator
PAR	Precision approach radar
PARL	Parallel
PAX	Passenger(s)
PCD	Proceed or proceeding
PCN	Pavement classification number
PDG	Procedure design gradient
PE	Ice pellets
PER	Performance
PERM	Permanent
PJE	Parachute jumping exercise
PLA	Practice low approach
PLN	Flight plan
PLVL	Present level
PN	Prior notice required
PNR	Point of no return
PO	Dust devils
POB	Persons on board
POSS	Possible
PPI	Plan position indicator
PPR	Prior permission required
PPSN	Present position
PRFG	Aerodrome partially covered by fog
PRI	Primary
PRKG	Parking
PROB	Probability
PROC	Procedure
PROV	Provisional
PS	Plus
PSG	Passing
PSN	Position
PSP	Pierced steel plank

PTN	Procedure turn
PTS	Polar track structure
PWR	Power
Q	
QBI	Compulsory IFR flight
QDM	Magnetic heading (zero wind)
QDR	Magnetic bearing
QFE	Atmospheric pressure at aerodrome elevation (or at runway threshold)
QFU	Magnetic orientation of runway
QNH	Altimeter sub-scale setting to obtain elevation when on the ground
QTE	True bearing
QUAD	Quadrant
R	
R	Red
R	Right (runway identification)
R ...	Restricted area (followed by identification)
RA	Rain
RAC	Rules or the air and air traffic services
RAFC	Regional area forecast centre
RAG	Ragged
RAG	Runway arresting gear
RAI	Runway alignment indicator
RB	Rescue boat
RCA	Reach cruising altitude
RCC	Rescue co-ordination centre
RCF	Radiocommunication failure (message type designator)
RCH	Reach or reaching
RCL	Runway centre line
RCLL	Runway centre line light(s)
RCLR	Recleared
RDH	Reference datum height (for ILS)
RDL	Radial
RDO	Radio
RE ...	Recent (used to qualify weather phenomena e.g. RERA - recent rain)
REA	Ready Message
REC	Receive or receiver
REDL	Runway edge light(s)
REF	Reference to ... or refer to ...
REG	Registration
REJ	Rejected
RENL	Runway end light(s)
REP	Report or reporting or reporting point
REQ	Request or requested
RERTE	Reroute
RG	Range (lights)
RIF	Reclearance in flight
RITE	Right (direction of turn)
RL	Report leaving
RLA	Relay to
RLCE	Request level change en-route
RLLS	Runway lead-in lighting system
RLNA	Requested level not available
RMK	Remark
RNAV	(to be pronounced "AR-NAV") Area navigation
RNG	Radio range
RNP	Required navigation performance
ROBEX	Regional OPMET bulletin exchange(scheme)
ROC	Rate of climb
ROD	Rate of descent
ROFOR	Route forecast (in aeronautical meteorological code)
RON	Receiving only
RPL	Repetitive flight plan
RPLC	Replace or replaced

RPS	Radar position symbol
RQMNTS	Requirements
RQP	Request flight plan (message type designator)
RQS	Request supplementary flight plan (message type designator)
RR	Report reaching
RRA	(or RRB, RRC....etc in sequence) delayed meteorological message (message type designator)
RSC	Rescue sub-centre
RSCD	Runway surface condition
RSP	Responder beacon
RSR	En-route surveillance radar
RTD	Delayed (used to indicate delayed meteorological message); (message type designator)
RTE	Route
RTF	Radiotelephone
RTG	Radiotelegraph
RTHL	Runway threshold light(s)
RTN	Return or returned or returning
RTODAH	Rejected take-off distance available, helicopter
RTS	Return to service
RTT	Radioteletypewriter
RTZL	Runway touchdown zone light(s)
RUT	Standard regional route transmitting frequencies
RV	Rescue vessel
RVR	Runway visual range
RWY	Runway
S	
S	South or southern latitude
SA	Sand
SALS	Simple approach lighting system
SAN	Sanitary
SAP	As soon as possible
SAR	Search and rescue
SARPS	Standards and recommended practices (ICAO)
SAT	Saturday
SATCOM	Satellite communication
SB	Southbound
SC	Stratocumulus
SCT	Scattered
SDBY	Stand by
SE	South-east
SEB	South-eastbound
SEC	Seconds
SECT	Sector
SELCAL	Selective calling system
SEP	September
SER	Service or servicing or served
SEV	Severe (used e.g. to qualify icing and turbulence reports)
SFC	Surface
SG	Snow grains
SGL	Signal
SH ...	Showers (followed by RA=rain, SN=snow, PE=ice pellets, GR=hail, GS=small hail and or snow pellets or combinations thereof, e.g. SHRASN=showers of rain and snow)
SHF	Super high frequency (3 000 to 30 000 MHz)
SID	Standard instrument departure
SIF	Selective identification feature
SIGMET	Information concerning en-route weather phenomena which may affect the safety of operations
SIGWX	Significant weather
SIMUL	Simultaneous or simultaneously
SIWL	Single isolated wheel load
SKC	Sky clear
SKED	Schedule or scheduled
SLP	Speed limiting point
SLW	Slow
SMC	Surface movement control

SMR	Surface movement radar
SN	Snow
SNOWTAM	A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area , by means of a specific format
SPFNI	Aviation selected special weather report (in aeronautical meteorological code)
SPFNIAL	Special meteorological report (in abbreviated plain language)
SPL	Supplementary flight plan (message type designator)
SPOC	SAR point in contact
SPOT	Spot wind
SQ	Squall
SQL	Squall line
SR	Sunrise
SRA	Surveillance radar approach
SRE	Surveillance radar element of precision approach radar system
SRG	Short range
SRR	Search and rescue region
SRY	Secondary
SS	Sandstorm
SS	Sunset
SSB	Single sideband
SSE	South south east
SSR	Secondary surveillance radar
SST	Supersonic transport
SSW	South southwest
ST	Stratus
STA	Straight-in approach
STAR	Standard instrument arrival
STD	Standard
STF	Stratiform
STN	Station
STNR	Stationary
STOL	Short take-off and landing
STS	Status
STWL	Stopway light(s)
SUBJ	Subject to
SUN	Sunday
SUP	Supplement (AIP supplement)
SUPPS	Regional supplementary procedures
SVC	Service message
SVCBL	Serviceable
SW	South-west
SWB	South-westbound
SWY	Stopway
T	
T	Temperature
TA	Transition altitude
TACAN	UHF tactical air navigation aid
TAF	Aerodrome forecast
TAIL	Tail, wind
TAR	Terminal area surveillance radar
TAS	True airspeed
TAX	Taxiing or taxi
TC	Tropical cyclone
TCU	Towering cumulus
TDO	Tornado
TDZ	Touchdown zone
TECR	Technical reason
TEL	Telephone
TEMPO	Temporary or temporarily
TEND	Trend forecast
TFC	Traffic

TGL	Touch-and-go landing
TGL	Touch-and-go landing
TGS	Taxiing guidance system
THR	Threshold
THRU	Through
THU	Thursday
TIL	Until
TIP	Until past...(place)
TKOF	Take off
TL ...	Till (followed by time by which weather change is forecast to end)
TLOF	Touchdown and lift-off area
TMA	Terminal control area
TNA	Turn altitude
TNH	Turn height
TO	To...(place)
TOC	Top of climb
TODA	Take-off distance available
TODAH	Take-off distance available, helicopter
TOP	Cloud top
TORA	Take-off run available
TP	Turning point
TR	Track
TRA	Temporary reserved airspace
TRANS	Transmits or transmitter
TRL	Transition level
TROP	Tropopause
TS	Thunderstorm (in aerodrome reports and forecasts, ts used alone means thunder heard but no precipitation at the aerodrome)
TS...	Thunderstorm (followed by RA= RAIN, SN= snow, PE= ice pellets, GR= hail, GS= small hail and/or snow pellets or combinations thereof, e.g. TSRASN= thunderstorm with rain and snow)
TT	Teletypewriter
TUE	Tuesday
TURB	Turbulence
TVOR	Terminal VOR
TWR	Aerodrome control tower or aerodrome control
TWY	Taxiway
TWYL	Taxiway-link
TYP	Type of aircraft
TYPH	Typhoon
U	
U	Upward (tendency in rvr during previous 10 minutes)
U/S	Unserviceable
UAB	Until advised by...
UAC	Upper area control centre
UAR	Upper air route
UDF	Ultra high frequency direction-finding station
UFN	Until further notice
UHDT	Unable higher due traffic
UHF	Ultra high frequency (300 to 3 000 MHz)
UIC	Upper information centre
UIR	Upper flight information centre
ULR	Ultra long range
UNA	Unable
UNAP	Unable to approve
UNL	Unlimited
UNREL	Unreliable
UTA	Upper control area
UTC	Co-ordinated universal time
V	
VA	Volcanic ash
VAC	Visual approach chart

VAL	In valleys
VAN	Runway control van
VAR	Magnetic variation
VAR	Visual-aural radio range
VASIS	Visual approach slope indicator system
VC	Vicinity of the aerodrome (followed by FG=fog, FC=funnel cloud, PO=dust-sand whirls, BLDU=blowing dust, BLSA = blowing sand or BLSN=blowing snow, e.g. VC FG = vicinity fog)
VCY	Vicinity
VDF	Very high frequency direction-finding station
VER	Vertical
VFR	Visual flight rules
VHF	Very high frequency (30 to 300 Mhz)
VIP	Very important person
VIS	Visibility
VLF	Very low frequency (3 to 30 khz)
VLR	Very long range
VMC	Visual meteorological conditions
VOLMET	Meteorological information for aircraft in flight
VOR	VHF omnidirectional radio range
VORTAC	VOR and TACAN combination
VOT	VOR airborne equipment test facility
VRB	Variable
VSA	By visual reference to the ground
VSP	Vertical speed
VTOL	Vertical take-off and landing
W	
W	West or western longitude
W	White
WAC	World aeronautical chart-ICAO 1:1 000 000
WAFC	World area forecast centre
WB	Westbound
WBAR	Wing bar lights
WDI	Wind direction indicator
WDSPR	Widespread
WED	Wednesday
WEF	With effect from or effective from
WI	Within
WID	Width
WIE	With immediate effect or effective immediately
WILCO	Will comply
WINTEM	Forecast upper wind and temperature for aviation
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
WX	Weather
X	
X	Cross
XBAR	Crossbar (of approach lighting system)
XNG	Crossing
XS	Atmospherics

Y	
Y	Yellow
YCZ	Yellow caution zone (runway lighting)
YR	Your
Z	
Z	Co-ordinated universal time (in meteorological messages)

GEN 2.3 CHART SYMBOLS

1 Aerodromes

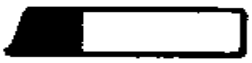
1.1 Charts other than approach charts

Civil (land)	
Civil (water)	
Joint civil and military (land)	
Joint civil and military (water)	
Military (land)	
Military (water)	
Emergency aerodrome or aerodrome with no facilities	
Sheltered anchorage	
Heliport	

1.2 Approach charts

The aerodrome on which the procedure is based	
Aerodromes affecting the traffic pattern on theaerodrome on which the procedure is based	

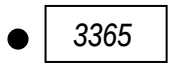
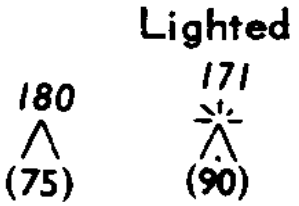
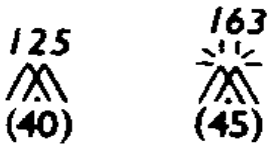
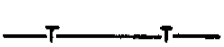
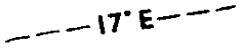
1.3 Aerodrome charts

Hard surface runway	
Unpaved runway	
Stopway	

2 Aerodrome installations and lights

Aerodrome reference point (ARP)	
Taxiways and parking areas	
Control tower	
Point light	
Barrette	
Marine light	
Obstacle light	
Aeronautical ground light	
Wind direction indicator (lighted)	
Wind direction indicator (unlighted)	
Landing direction indicator (lighted)	
Landing direction indicator (unlighted)	

3 Miscellaneous

Highest elevation on chart	
Obstacles	
Group obstacles Note. – Numerals in italics elevation of top of obstacle above sea level. Upright numerals in parentheses indicate height above specified datum	
Transmission line or overhead cable	
Isogonal	
Restricted airspace (prohibited, restricted or danger areas)	
Common boundary of two areas	

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GEN 2.4 Location indicators

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

ENCODE

Location	Indicator
BENGUELA/17 De Setembro	FNBG*
CABINDA/Cabinda	FNCA*
HUAMBO/Albano Machado	FNHU*
IBE/Yuri Gagarin	FNMO*
LUANDA/4 De Fevereiro	FNLU
LUBANGO/Mukanka	FNUB*
LUENA/Moxico	FNUE*
ONDJIVA/Ondjiva	FNGI*
SAURIMO/Saurimo	FNSA*

DECODE

Indicator	Location
FNBG*	BENGUELA/17 De Setembro
FNCA*	CABINDA/Cabinda
FNGI*	ONDJIVA/Ondjiva
FNHU*	HUAMBO/Albano Machado
FNLU	LUANDA/4 De Fevereiro
FNMO*	IBE/Yuri Gagarin
FNSA*	SAURIMO/Saurimo
FNUB*	LUBANGO/Mukanka
FNUE*	LUENA/Moxico

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

1 LIST OF RADIO NAVIGATION AIDS (ENCODE)

ID	Station name	Facility	Purpose
BG	BENGUELA	NDB	AE
CA	CABINDA	NDB	A
CV	CUITO CUANAVAL	NDB	E
GI	NGIVA	NDB	A
HU	HUAMBO	NDB	A
KU	KUITO	NDB	E
LB	LOBITO	NDB	A
LU	LUANDA/4 De Fevereiro	ILS RWY 23 LLZ CAT I	A
LU	LUANDA	NDB	A
MO	NAMIBE	NDB	A
SA	SAURIMO	NDB	AE
SO	SOYO	NDB	E
UB	LUBANGO	NDB	AE
UE	LUENA	NDB	AE
VCA	CABINDA	VOR/DME	AE
VMO	NAMIBE	VOR/DME	AE
VNA	LUANDA	VOR/DME	AE
VSA	SAURIMO	VOR/DME	AE
VUE	LUENA	VOR/DME	AE
MA	MALANGE	NDB	E

2 LIST OF RADIO NAVIGATION AIDS (DECODE)

Station name	Facility	ID	Purpose
BENGUELA	NDB	BG	AE
CABINDA	VOR/DME	VCA	AE
CABINDA	NDB	CA	A
CAFUNFO	NDB	CF	E
CUITO CUANAVAL	NDB	CV	E
DUNDO	NDB	DU	E
HUAMBO	VOR/DME	VHU	AE
HUAMBO	NDB	HU	A
KUITO	NDB	KU	E
LOBITO	NDB	LB	A
LUANDA	NDB	LU	A
LUANDA	VOR/DME	VNA	AE
LUANDA/4 De Fevereiro	ILS RWY 23 LLZ CAT I	LD	A
LUBANGO	NDB	UB	AE
LUENA	NDB	UE	AE
LUENA	VOR/DME	VUE	AE
LUZAMBA	NDB	LZ	A
MALANGE	NDB	MA	E
MENONGUE	NDB	ME	E
NAMIBE	NDB	MO	A
NAMIBE	VOR/DME	VMO	AE
NGIVA	NDB	GI	A
SAURIMO	NDB	SA	AE
SAURIMO	VOR/DME	VSA	AE
SOYO	NDB	SO	AE

GEN 2.6 Conversion tables

1 DISTANCE CONVERSION

Nautical Miles/Km		Km/Nautical Miles		Feet into Meters		Meters into Feet	
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	0.37	0.2	0.11	2	0.61	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	16.4
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	9.26	5	2.7	50	15.24	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	18.52	10	5.4	100	30.48	100	328.08
20	37.04	20	10.8	200	60.96	200	656.17
30	55.56	30	16.2	300	91.44	300	984.25
40	74.08	40	21.6	400	121.92	400	1 312.34
50	92.6	50	27	500	152.4	500	1 640.42
60	111.12	60	32.4	600	182.88	600	1 968.50
70	129.64	70	37.8	700	213.36	700	2 296.59
80	148.16	80	43.2	800	243.84	800	2 624.67
90	166.68	90	48.6	900	274.32	900	2 952.76
100	185.2	100	54	1 000	304.8	1 000	3 280.84
200	370.4	200	107.99	2 000	609.6	2 000	6 561.68
300	555.6	300	161.99	3 000	914.4	3 000	9 842.52
400	740.8	400	215.98	4 000	1 219.200	4 000	13 123.36
500	926	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		

2 CONVERSION TABLES FROM KILOGRAMMES TO POUNDS 1KG=2.2046 Lb

Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb
1	2.2	15	33.1	150	330.7	1500	3306.9	15000	33069
2	4.4	20	44.1	200	440.9	2000	4409.2	20000	44092
3	6.6	30	66.1	300	661.4	3000	6613.8	30000	66138
4	8.8	40	88.2	400	881.8	4000	8818.4	40000	88184
5	11.0	50	110.2	500	1102.3	5000	11023.0	50000	110230
6	13.2	60	132.3	600	1322.8	6000	13227.6	60000	132276
7	15.4	70	154.3	700	1543.2	7000	15432.2	70000	154322
8	17.6	80	176.4	800	1763.7	8000	17636.8	80000	176368
9	19.8	90	198.4	900	1984.1	9000	19841.4	90000	198414
10	22.0	100	220.5	1000	2204.6	10000	22046.0	100000	220460

3 CONVERSION TABLE FROM POUNDS TO KILOGRAMMES 1lLb= 0.454 Kg

Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
1	0.45	15	6.8	150	68.0	1500	680.4	15000	6804
2	0.91	20	9.1	200	90.7	2000	907.2	20000	9072
3	1.36	30	13.6	300	136.1	3000	1360.8	30000	13608
4	1.81	40	18.1	400	181.4	4000	1814.4	40000	18144
5	2.27	50	22.7	500	226.8	5000	2268.0	50000	22680
6	2.72	60	27.2	600	272.2	6000	2721.6	60000	27216
7	3.18	70	31.8	700	317.5	7000	3175.2	70000	31752
8	3.63	80	36.3	800	362.9	8000	3628.8	80000	36288
9	4.08	90	40.8	900	408.2	9000	4082.4	90000	40824
10	4.54	100	45.4	1000	453.6	10000	4536.0	100000	45360

GEN 2.7 SUNRISE/SUNSET TABLE

Tables on the following pages have been prepared by the Portugal National Meteorological Agency and are reproduced here with their permission. The tables include all civil airports and aerodromes. Times in the tables are given in UTC for Sunrise (SR) and Sunset (SS) for the years from 1997.

AERODROME	COORD	JAN	FEV	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BENGUELA	S12º36'.35"	04:52	05:50	05:10	05:11	05:16	05:25	05:28	05:20	05:01	04:50	04:30	04:35
	E013º24'.13"	17:39	17:35	17:21	17:01	16:48	16:48	16:55	17:01	17:02	17:03	17:11	17:27
CABINDA	S05º35'.11"	05:08	05:16	05:16	05:11	05:11	05:17	05:22	05:17	05:04	04:50	04:44	04:52
	E012º11'.18"	17:32	17:33	17:24	17:11	17:03	17:05	17:11	17:13	17:08	17:03	17:03	17:19
HUAMBO	S12º36'.35"	04:42	04:55	05:00	05:02	05:07	05:16	05:19	05:11	05:51	04:31	04:20	04:35
	E013º24'.13"	17:30	17:26	17:11	16:51	18:39	16:38	16:45	16:51	16:52	16:54	17:02	17:27
LUANDA	S12º36'.35"	04:58	05:09	05:11	05:09	05:11	05:19	05:23	05:17	05:01	04:44	04:36	04:42
	E013º24'.13"	17:33	17:32	17:20	17:04	16:54	16:55	17:02	17:06	17:03	17:01	17:07	17:20
LUBANGO	S12º36'.35"	04:48	05:02	05:09	05:12	05:19	05:28	05:31	05:21	05:00	04:38	04:26	04:30
	E013º24'.13"	17:42	17:36	17:19	16:58	16:44	16:43	16:51	16:58	17:01	17:04	17:14	17:31
LUENA	S12º36'.35"	04:28	04:40	04:44	04:45	04:49	04:58	05:01	04:52	04:33	04:14	04:05	04:12
	E013º24'.13"	17:12	17:08	16:56	16:35	16:23	16:24	16:31	16:36	16:36	16:37	16:45	17:00
NAMIBE	S12º36'.35"	04:52	05:07	05:14	05:18	05:25	05:34	05:38	05:28	05:06	04:44	04:31	04:35
	E013º24'.13"	17:48	17:43	17:26	17:04	16:50	16:48	17:56	17:03	17:06	17:09	17:20	17:36
SAURIMO	S12º36'.35"	04:28	04:40	04:42	04:41	04:44	04:51						
	E013º24'.13"	17:06	17:04	16:52	16:35	16:24	16:25						

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GEN 3.1 AERONAUTICAL INFORMATION SERVICES

1 Responsible service

1.1 The Aeronautical Information Service, which forms part of the angolan Civil Aviation Authority, ensures the flow of information necessary for the safety, regularity and efficiency of international and national air navigation within the area of its responsibility as indicated under GEN 3.1.2 below.

1.2 It consists of AIS Headquarters, International NOTAM Office (NOF) and AIS units established at the Luanda International Airport 4 de Fevereiro:

Postal address:

Instituto Nacional da Aviação Civil
AIS Headquarters - INAVIC
Tel:244 222 338 596 or 222 335 936
Fax:244 222 390 529 or 222 339 356
AFS:FNLUYNYX

Postal address:

International NOTAM Office NOF
Luanda International Airport 4 de Fevereiro
Tel:244 222 350 678
Fax:244 222 350 678
AFS:FNLUYNYX

The service is provided in accordance with the provisions contained in ICAO Annex 15 — Aeronautical Information Services.

2 Area of responsibility

The Aeronautical Information Service is responsible for the collection and dissemination of information for the entire territory of Angola and for the airspace over the high seas encompassed by the Luanda Flight Information Region.

3 Aeronautical publications

3.1 Aeronautical information

The aeronautical information is provided in the form of the Integrated Aeronautical Information Package consisting of the following elements:

- Aeronautical Information Publication (AIP);
- Amendment service to the AIP (AIP AMD);
- Supplement to the AIP (AIP SUP);
- NOTAM and Pre-flight Information Bulletins (PIB);
- Aeronautical Information Circulars (AIC); and
- Checklists and summaries.

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.

3.2 Aeronautical Information Publication (AIP)

Angola AIP, issued in one volume is the basic aeronautical information document published for Angola and contains information of a long lasting character essential to air navigation. It is available in English only and is maintained up to date by an amendment service at regular intervals of twice a year consisting of reprinted pages and in the case of minor amendments manuscript corrections, amendments together with checklists are normally issued as and when necessary. AIP amendment publication dates will be on the first AIRAC dates of June and December of each year. When an AIP amendment will not be published at the established interval or publication dates, a NIL notification shall be originated and distributed by the monthly printed plain language summary of NOTAM or by AIP Supplement.

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GEN 3.2 AERONAUTICAL CHARTS

1. GENERAL

1.1 Applicable ICAO Documents

Annex 4 Aeronautical charts and doc 8697 Aeronautical Charts Manual.

1.2 Applicable ICAO Documents

NIL

2 Maintenance of charts

Information concerning new maps and charts will be notified by Aeronautical Information Circular.
Item of information found after publication to have been incorrect at the aeronautical information circular date, are corrected immediately by NOTAM if they are of operational significance, attention being directed to the particular chart affected.

3 Purchase arrangements

The above mentioned publications are procurable from the "Centro de Documentação e Informação" of "Instituto Nacional da Aviação Civil" on an exchange basis or sale. Place orders to:

Post:

Centro de Documentação e Informação
AIS Headquarters - INAVIC
Tel:244 222 338 596 or 222 335 936
Fax:244 222 390 529 or 222 339 356
AFS:FNLUYAYX

4 Aeronautical chart series available

4.1 The following series of aeronautical charts are available:

a) World Aeronautical Chart — ICAO 1:1 000 000;
b) Aerodrome chart-ICAO;
c) Aerodrome Obstacle Chart-ICAO-Type A;
d) Precision Approach Terrain Chart- ICAO;
e) Terminal Area Chart-ICAO;
f) Standard Departure Chart- Instrument (SID);
g) Standard Arrival Chart- Instrument (STAR);
h) Visual Approach Chart- ICAO;
i) Instrument Approach Chart-ICAO.

4.2 General description of each series

To be developed

5 List of aeronautical charts available

Those chart series marked by an asterisk form part of the AIP.

Title	Scale	Name and/or number	Price	Date
IAC		HUANBO/Albano Machado		
		VOR/DME RWY 29	AIP	02 JUL 2007
		VOR RWY 29	AIP	02 JUL 2007
		RNAV (GNSS) RWY 29	AIP	02 JUL 2007
		VOR/DME RWY 11	AIP	02 JUL 2007
		RNAV (GNSS) RWY 11	AIP	19 JUL 2007
		NAMIBE/ Yuri Gagarine		
		VOR/DME RWY 08	AIP	17 JUL 2007
		RNAV (GNSS) RWY 08	AIP	17 JUL 2007
		VOR/DME RWY 26	AIP	16 JUL 2007
		RNAV (GNSS) RWY 29	AIP	17 JUL 2007
		ONDJIVA/11 de Novembro		
		NDB RWY 13	AIP	11 JUL 2007
		RNAV (GNSS) RWY 13	AIP	14 JUL 2007
		NDB RWY 31	AIP	11 JUL 2007
		RNAV (GNSS) RWY 31	AIP	14 JUL 2007

Title of series	Scale	Name and/or number	Price	Date
IAC		LUANDA/4 De Fevereiro		
		VOR/DME RWY 23	AIP	22.FEB 2001
		VOR/DME RWY 05	AIP	
		NDB RWY 23	AIP	22.FEB 2001
		NDB RWY 05	AIP	22.FEB 2001
		ILS RWY 23	AIP	
		BENGUELA/17 De Setembro		
		NDB RWY 14	AIP	
		CABINDA/Cabinda		
		NDB RWY 19	AIP	
		LUENA/Moxico		
		NDB RWY 11	AIP	22.FEB 2001
SID		LUANDA/4 De Fevereiro		
		RNAV (GNSS) FNLU RWY 23 (G241V 1A)	AIP	
		RNAV (GNSS) FNLU RWY 23 (G122T 1A)	AIP	
		RNAV (GNSS) FNLU RWY 23 (G180U 1A)	AIP	
		RNAV (GNSS) FNLU RWY 05	AIP	
		NAMIBE/Yuri Gagarine		
		FNMO RWY 08/26	AIP	21.JUL 07
		ONDJIVA/11 De Novembro		
		FNGI RWY 13/31	AIP	01.JUL 07
STAR		LUANDA/4 De Fevereiro		
		RNAV (GNSS) FNLU RWY 23	AIP	
		LUENA/Moxico		
		NDB RWY 29	AIP	22.FEB 2001

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

To be developed

7 Topographical charts

To supplement the aeronautical charts, a wide range of topographical charts is available from:

Post address:

Instituto Nacional da Aviação Civil
Caixa Postal 569
Luanda Angola
Tel:244 - 222-338596 or 335936
Fax:244- 222- 390529 or 339356
Telex:4118 DNAC AN or 2134 MINTRANS AN
AFS:FNLUYAYX
Email:inavic2@snet.co.ao, or inavic@snet.co.ao
Aeronautica Luanda

8 Corrections to charts not contained in the AIP

NIL

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GEN 3.3 AIR TRAFFIC SERVICES

1 Responsible service

Empresa Nacional de Exploração e Navegação Aérea (ENANA) is the responsible authority for the provision of air traffic services, acting under supervision of the National Institute of Civil Aviation.

In general the air traffic rules and procedures in force and the organisation of air traffic services are in conformity with ICAO Standards, Recommended Practices and Procedures. Differences between the national and international rules and procedures will be inserted in due time.

2 Area of responsibility

Air traffic services are provided for the entire territory of Angola, including territorial waters as well as in the airspace over the high seas encompassed by Angola FIR/UIR.
The airspace of Angola territory, including adjacent international waters comprise single FIR (Luanda FIR)

3 Types of services

3.1 The following types of services are provided:

- Approach Control service;
- Area Control Service;
- Flight Information Services;
- Alerting Services.

3.2 With the exception of services provided at military air bases, the following types of services are provided at aerodromes:

- Aerodrome Control Service;
- Aerodrome Flight Information Service

4 Co-ordination between the operator and ATS

Co-ordination between the operator and air traffic services is effected in accordance with 2.1.5 of ICAO Annex 11

5 Minimum flight altitude

The minimum flight altitudes on the ATS routes as listed in ENR 3.1 and 3.2 have been determined so as to ensure at least 300m (1000FT) vertical clearance above the highest obstacle within 10nm on each side of the centre line of the route or 600m (2000 FT) above mountainous area. However, where the angular divergence of navigational aid signal, in combination with the distance between the navigation aids, could result in an aircraft being more than 8Km on either side of the centre line, the 18Km protection limit is increased by the extent to which the divergence is more than 8Km from the centre line.

6 ATS units address list

Unit name	Postal address	Telephone NR	TELEFax NR	Telex NR	AFS address
1	2	3	4	5	6
Luanda Control	CCR, Aeroporto internacional 4 de Fevereiro, Luanda	244 222 351 027 244 222 651 035		3009 ENANA CR	FNLUZRZX
Luanda Approach	CCR, aeroporto internacional 4 de Fevereiro, Luanda	244 222 351 027 244 222 651 035		3009 ENANA CR	FNLUZRZX
Luanda Tower	CCR, aeroporto internacional 4 de Fevereiro, Luanda	244 222 351 027 244 222 651 035		3009 ENANA CR	FNLUZTZX
Luanda Information	CCR, aeroporto internacional 4 de Fevereiro, Luanda	244 222 351 027 244 222 651 035		3009 ENANA CR	FNLUZTZX

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GEN 3.4 COMMUNICATION SERVICES

1 Responsible service

The authority responsible for the management of the telecommunication and air navigation facility services in Angola is the Director General of ENANA.E.P

Post:
Direcção Geral da ENANA - E.P;
C.P 841 Luanda/Angola
Tel:244 - 222 - 338595
Fax:244 -222 - 393626
Telex:3015 ENANA DG NA
AFS:FNLUYEYX

2 Area of responsibility

The telecommunications services are provided on a permanent basis within the operational hours indicated at each airport in the AD part.

Enquiries, suggestions or complaints regarding any Telecommunications services should be referred to:

Post:
ENANA - E.P Departamento de Instalação e Manutenção
Fax:244-222-393626
Tel:244-222-352652
AFS:FNLUYEYX
Email:

3 Type of Service

3.1 Radio navigation services

The following types of radio aids to navigation are available:
- LF/MF non-directional beacon (NDB)
- VHF direction-finding station (VDF)
- Instrument landing system (ILS)
- VHF omnidirectional radio range (VOR)
- Distance-measuring equipment (DME)

3.2 Aeronautical Mobile Service

The aeronautical stations maintain a continuous watch on their stated frequencies during the published hours of service unless otherwise notified.

An aircraft should normally communicate with the air-ground control radio station that exercises control in the area in which the aircraft is flying. Aircraft should maintain a continuous watch on the appropriate frequency of the control station and should not abandon watch, except in an emergency, without informing the control radio station

3.2.1 Aeronautical Fixed Service

Messages to be transmitted over the Aeronautical Fixed Services are accepted only if they satisfy the requirements of:
a) they satisfy the requirements of *ICAO Annex 10*, Vol. II, Chapter 3, 3.3;
b) they are prepared in the form specified in *ICAO Annex 10*;
c) the text of an individual message does not exceed 200 groups.

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

3.3 Broadcasting service

The following meteorological broadcast are available for the use of aircraft: SYNOPS, TEMPS and TAF

3.4 Language used:

English is the language normally used in the types of service described in the above paragraph. However in the mobile service, the Portuguese language may be used in radiotelephony.

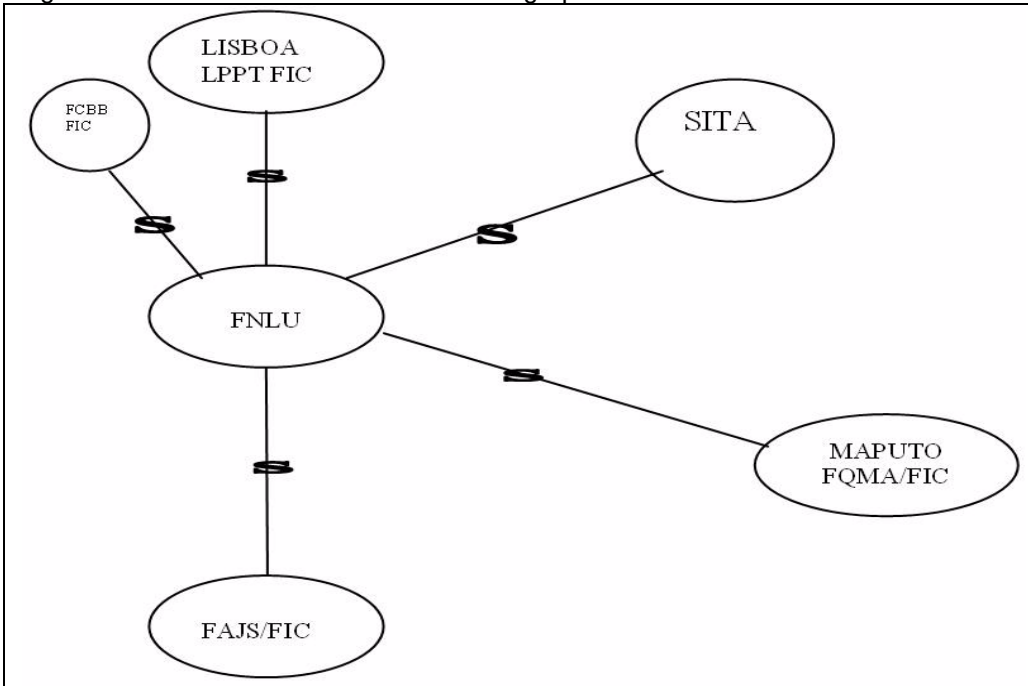
Details of the various facilities available for en-route traffic can be found in Part 2 ENR 4

4 Requirements and conditions

Aircraft are obliged to carry at least the following radio equipment:

a) VHF and HF radio communication equipment operating on all published frequencies;
b) Radio compass equipment (ADF);
c) ELT/ELBA;
d) VOR/DME.

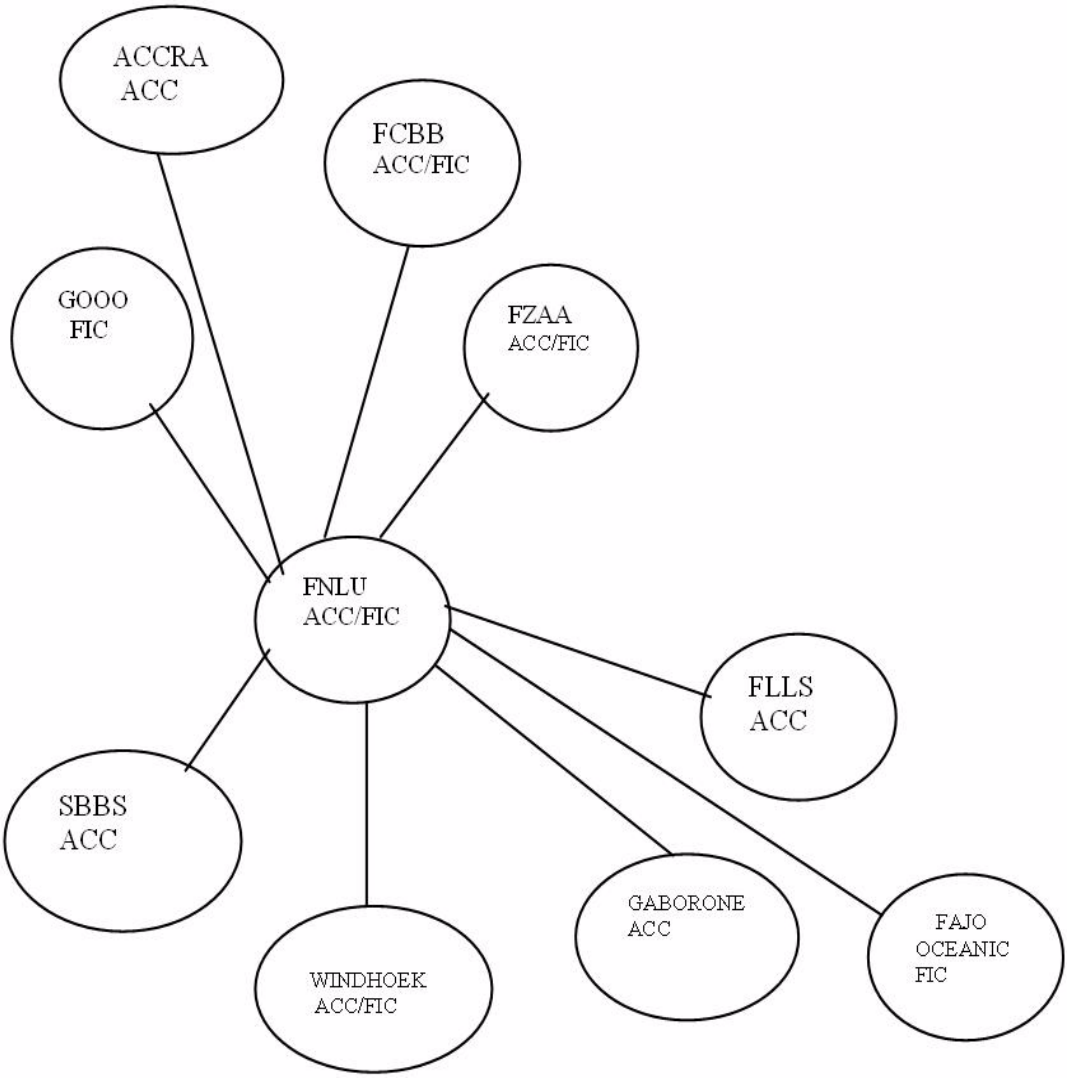
Figure 2. Aeronautical Fixed services: Telegraph



LEGEND

Landline teletypewriter (LTT)	
Radio teletypewriter (RTT)	
Manual Circuit Simplex (MAS)	
Satellite Circuit	S
Simplex Circuit	
Duplex Circuit	
International Circuit	

Figure 3. Aeronautical Fixed services: Telephone



VSAT		INMARSAT
LUANDA	LUSAKA WINDHOEK GABERONE JOHANNESBURG OCEANIC KINSHASA	LUANDA- BRAZIL LUANDA- ACCRA DAKAR OCEANIC LUSAKA WINDHOEK GABERONE JOHANNESBURG OCEANIC KINSHASA

AERONAUTICAL FIXED SERVICES INTERNATIONAL AND DOMESTIC CIRCUIT					
STATION			CORRESPONDENT		NUMBER AND TYPE OF CHANNELS
NAME	LOCATION INDICATION	CALL SIGN	NAME	CALL SIGN	
1	2	3	4	5	6
Luanda	FNLU	Luanda Information	Menongue		RTF
	FNBG		Namibe		RTF
	FNCA		P.Amboim		RTF
	FNHU				
	FNMA				
	FNMO				
	FNUG				
	D2 U1		Sao Tome	S9 Y2	LTT DX
			Saurimo		6884

AERONAUTICAL FIXED SERVICES INTERNATIONAL AND DOMESTIC CIRCUIT				
RADIO FREQUENCIES	TYPE OF TRAFFIC		HOURS UTC	REMARKS
TRANS KHZ	REC KHZ			
7	8	9	10	11
6884	6884	FIS AFS	HJ (0600/1800)	Direct Speech

5 Applicable ICAO Documents

The following ICAO documents are applied:

- Annex 10: Aeronautical telecommunications;
- Doc 8400: ICAO Abbreviations and codes;
- Doc 8585: Designators for Aircraft operators Agencies, Authorities and services.
- Doc 7030, Part 3: Regional supplementary procedures; (com procedures for AFI)
- Doc 7910: Location indication.

GEN 3.5 METEOROLOGICAL SERVICES

1 Responsible authority

Meteorological services for civil aviation in Angola are provided by the "Instituto Nacional de Hidrometeorologia de Angola"

Post address:

Instituto Nacional de Hidrometeorologia de Angola
P.O. Box 1228C Luanda/Rep. de Angola
Tel:244-222-351951
Fax:
Telex:
AFS:FNLUYMYX

At Luanda airport observations and forecasts are provided by the " Centro Meteorológico Nacional de Luanda"

The service is provided in accordance with the provisions contained in the following ICAO documents: Annex-3 - Meteorological service for International air Navigation. Doc 7030 - Regional Supplementary procedures.

1.2 Differences from ICAO Standards - Recommended practices and procedures.

NIL

2 Area of responsibility

Meteorological service is provided within Luanda FIR

3 Meteorological observations and reports

Table GEN 3.5.3 Meteorological observations and reports

Name of station/Location indicator	Type & frequency of observation/automatic observing equipment	Types of MET reports & Supplementary Information included	Observation System & Site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
Luanda/4 de FevereiroHalf FNLU	Half hourly plus Special	METAR SPECI	SFC wind sensors: see AD chart Thermometer: see AD chart Cup Anemometer 300 m FM THR	H24	Climatological tables AVBL
Huambo/Albano Machado FNHU	Half hourly plus Special Observations	METAR SPECI TREND	Thermometer: See AD chart Cup Anemometer 300 m Complete observation station 300 m S of THR Pressure tube Anemometer on TWR	0500/1800	Climatological tables AVBL
All Aerodromes	Half hourly plus special observations	METAR SPECI		0500/1800	NIL

4 Types of services

Personal briefing and consultation for flights crew members is provided only at Luanda airport. For all other aerodromes flight and aerodrome forecast are available on request through the HF AMS voice channels.

Flight documentation is provided for domestic and international flights at Luanda airport. It comprises for significant weather, upper wind and upper air temperatures, for those Standard isobaric surfaces and the latest available aerodrome forecasts for destination, en-route, and alternate aerodromes.
Documentation is provided in tabular forms.

5 Notification required from operators

Notification from operators in respect of briefing, consultation needed by then (*Ref. ICAO Annex 3, Chapter 3.2.3*) is required for all flights. Notification should be received at least 2 hours before the expected time of departure for domestic flights and 6 hours before the expected time of departure for international flights.

6 Aircraft reports

Pursuant to Annex 3, Chapter 3.5.3.1 the making and transmission of aircraft reports (AIREP) is required at the following ATS reporting points

ARAKI	A/UA 400F	ILDIR	UR991F
EGSUD	A/UA 400F	AKAZU	UA617F
ILGER	UA611F	INUGA	UG450F
BUGRO	B/UB733F	ANUBI	UB733F
TERBA	UG 853F	ILGOL	UR987F
AGRAM	UG 853F	KILBI	UH600F/UB733F
GAPEL	UR 991F	AVIGI	UA611F/UR991F

6.1 Observing Systems and Operating Procedures

Surface wind is measured by cup anemometers at the aerodrome towers. Wind indicators are located in the meteorological station anemographs with dial indicators in the appropriate air traffic services units. At Luanda airport wind indicator is also available in the meteorological office. Cloud height is estimated by the observer. Ever, the departing and landing aircraft, whenever required reports clouds basics with reference to QFE. These observations are representative of the landing area.

Distance reading thermometers are not available. Current air temperature is observed in accordance with synoptic temperature.

7 Table Volmet Service

Name of station	CALL SIGN Identification (EM)	Frequency	Broadcast period	Hours of service	Aerodromes/ Heliports included	Contents & format of REP and FCST & Remarks
1	2	3	4	5	6	7
1) Volmet service not provided						

8 SIGMET service

Name of MWO/ location indicators	Hours	FIR or CTA served	Type of SIGMET/validity	Specific procedures	ATS unit served	Additional information
1	2	3	4	5	6	7
Luanda	H24	Luanda FIR	SIGMET/4 HR SIGMET SST/4 HR	SIGMET TS; validity 4 HR	Luanda ATS	NIL

8.1 General

For the safety of air traffic, the Meteorological Authority maintains an area meteorological watch and warning service. This service consists partly of a continuous weather watch within the lower and upper FIR and the issuance of appropriate information (SIGMET) by Meteorological Watch Offices and partly of the issuing of warnings for the respective aerodrome and, subject to agreement, for other aerodromes by all aeronautical MET offices.

8.2 Area meteorological watch service

The area meteorological watch service is performed by Luanda Meteorological Watch Office (MWO).
The MWO issues information in the form of SIGMET and AIRMET messages about the occurrence or expected occurrence of one or several of the following significant meteorological phenomena:

- thunderstorms1
- severe turbulence
- severe icing

The SIGMETs are issued in abbreviations and plain language using ICAO abbreviations and are numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to less than 4 hours from the time of transmission.

The MWO transmit SIGMETs issued by themselves, as well as SIGMET of adjacent MWOs and, upon agreement, also SIMETs of other MWOs, to the regional control centre competent for the FIR or the UIR.

In addition to the issuance of SIGMETs, the MWO will inform the area control centre/flight information centre about the occurrence or expected occurrence of thunderstorms or moderate turbulence within Luanda FIR. The information is intended for the safety of low level flights and is limited to the lower airspace.

8.3 Warning service

Warnings for the protection of parked and moored aircraft or of other equipment at the airport are issued by all aerodrome meteorological offices, if one or several of the following phenomena are expected to occur at the airport:

- hunderstorm
- hail
- heavy rain
- freezing precipitation

Differences from these criteria have to be agreed upon locally.

The warnings are generally issued in English and are distributed in accordance with a distribution list witch has to be agreed upon locally. In order to guarantee rapid dissemination of the warnings, the distribution list to be used shall, as far as possible, contain only one recipient for an interested group, this recipient will be responsible for the further dissemination of the warning within the group.

SIGMET information is disseminated, in addition to directed transmissions to aircraft general calls, as an aeronautical or radio broadcast H24:

a) For Luanda FIR, by the Area Control Centre
b) by the ATS units for their own area of responsibility.

The information is broadcasted from the MWO concerned and repeated every half full hour during the period of validity of the SIGMET information.

9 Other automated meteorological services

Table GEN 3.5.9 Other automated meteorological services

Service name	Information available	Area, route and aerodrome coverage	Telephone, telex and telefax numbers Remarks
1	2	3	4
Aeronautical Meteorological Luanda/4 de Fevereiro FNLU	The pronostic General Aviation Weather Chart (GWC) The European Low Level SWC The European Significant Weather Chart (EVR-GWC) The 850, 700, 400, 300, 250 nd hpa contour map	Africa and on request for entire world	Tel:(244 –2)-351951 Fax: Telex: Email:inamet@netagola.com AFS:FNLUYMYX
Meteorological Information Selfbriefing Terminal (MIST) Obtainable at any Flight Briefing Unit or Office PC by dedicated line dial up facility Broadcast FAX. Broadcast of WX FCST to telefax machine registered to the service	TAF; METAR; National/Regional WX- Radar INFO; Satelite imagery; Analysis FCST Charts of MSL pressure: FSC wind; SFC T; Sinificant cloud; SGWX, Upper wind/temperature charts; F 214 WIND; F215 WX; ASXX; FSXX; TAF; METAR	Africa and on request for entire world	Contact local weather centre or Aeronautical Meteorological
Aeronautical Meteorological Division Luanda/International On (teletext) available	Geral Avaible MET FCST system+GAFOR Bulletins VMC FCST; TAF; TREND; Special FCST for GLD FLY	ALL AFRICA	See above

10 Other automated meteorological services

To be developed

11 Applicable ICAO Documents

ICAO Standards, Recommended practices and procedures contained in the following documents are applied.

- Annex 3 - Meteorological Service for International Air Navigation
- Doc 7030 - Part 3 - Regional supplementary procedures
- Doc 8400 - ABC - ICAO Abbreviations and Codes.
- Doc 8896 - Manual of Aeronautical Meteorological practices.

EN 3.6 SEARCH AND RESCUE

1 Responsible service(s)

The search and rescue service in Angola is provided by the Empresa Nacional de Exploração de Aeroportos e Navegação Aerea (ENANA) in collaboration with the Angola Armed Forces (FAN, MGA) which has the responsibility for making the necessary facilities available.

The Rescue Coordination Centre is established at Luanda Airbase.

The address is as follows:

Rescue Coordination Centre (RCC Luanda)
Posto de Comando Central (PCC FAN)
Base Aérea de Luanda
C.P
(Aeronautical)
Tel:
Telex:
Fax:
AFS:FNLUYWYX

The address of Luanda Flight Information Centre (SAR Watch) is as follows:

Search and Rescue Watch
Centro de Informação de Voo
Centro de Controlo Regional do Aeroporto 4 de Fevereiro / Luanda
Tel:244 222 351 027 / 244 222 651 013
Fax:
AFS:FNLUZIZX, FNANZQZX

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 the territory and territorial waters of Angola.

3 Types of service

Details of related rescue are given in Table 3.6.3 — Search and Rescue Units. In addition, various elements of Angola Police organization, the merchant marine and the armed forces may be also available for search and rescue missions, when required. The aeronautical, maritime and public telecommunication services are also available to the search and rescue organization.

All search and rescue aircraft carry survival equipment capable of being dropped, that may be used by survivors according the situation, such as inflatable rubber dinghies equipped with medical supplies, emergency rations and survival radio equipment. Aircraft and marine craft are equipped to communicate on 121.5 MHz, 500KHZ and 8364KHZ, SAR aircraft and marine craft are equipped with direction-finding equipments.

Table 3.6.3 Search and Rescue Units

Name	Location	Facilities	Remarks
1	2	3	4
Luanda/International 4 de Fevereiro*	S08º51'19'' E013º14'02''	Bell SRG Mi 17 SRG	On standby at Air force base
Luanda/Marine base	S12º48'25'' E015º45'15''	Ships	On Standby at Marine base

4 SAR agreements

Request for 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 Coordination Center. Instructions as to the control which will be exercised on entry of such aircraft and/or personnel will be given by the Rescue Coordination Centre in accordance with a standing plan for the conduct of search and rescue in its area.

5 Conditions of availability
The SAR service and facilities in Angola are available without charge to neighboring States upon request to the RCC Luanda at all times when they are not engaged in search and rescue operations in the home territory.

6 Search and rescue signals

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

Ground/air visual signal codes for use by survivors

No.	Message	Code symbol
1	Require assistance	V
2	Require medical assistance	X
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	↑

Instructions for use:
1. Make signals not less than 8 ft (2.5 m).
2. Take care to lay out signals exactly as shown.
3. Provide as much colour contrast as possible between signals and background.
4. Make every effort to attract attention by other means such as radio, flares, smoke, reflected light.

6.2 Ground-air-visual signal code for use by rescue units

No.	Message	Code symbol
1	Operation completed	V
2	We have found all personnel	X
3	We have found only some personnel.	N
4	We are not able to continue returning to base	
5	Have divided into two groups. Each proceeding in direction indicated	
6	Information received that aircraft is in this direction	
7	Nothing found. Will continue to search	NIL

Air to Ground signals

The following signals by aircraft mean that the ground signals have been understood:
a) HJ - rocking the aircraft's wings
b) HN - flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

7 Applicable ICAO documents

ICAO Standards, Recommended Practices and Procedures contained in the following documents are applied:
- Annex 12: Search and Rescue
- Annex 13: Aircraft Accident Investigation
- Doc 7030 Regional supplementary Procedures for Alerting and SAR Services applicable in the AFI Region.

8 PROCEDURES

8.1 General

There are no aircraft specifically established for search action in the Angola SRR, however the Air Force will provide such aircraft as and when available for search and rescue purpose in Angola whenever this becomes necessary. Certain of these aircraft are equipped for air dropping of survival packs.

Arrangements have also been made with Police, Army and other local authorities concerned with the organization of ground search parties as circumstances may require.

8.2 Initiation of search action and advice to occupants of aircraft

Whenever an aircraft flying within the Angola SRR:

a) Fails to arrive within 30 minutes of the ETA last notified to, or estimated by ATS units:

Note: If search and rescue service is not required or if it is impossible to notify ATS about landing within the stipulated time, make a note in the flight plan in item 18 "no SAR".

b) Fails to communicate an ATS unit within a period of 30 minutes after the time of a scheduled position report or "Operations Normal" report should have been transmitted, from the time an unsuccessful attempt to establish communication with such aircraft was first made. Overdue action is immediately initiated followed by search rescue operation, if necessary.

Checks are made at all aerodromes and landing groups along the route, and if these fail to locate the position, concentrated search by aircraft and ground parties will be undertaken.

8.3 Procedures for pilot in command intercepting a distress call and/or message.

Whenever a distress call and/ or message is intercepted on radio telephony by a pilot in command of an aircraft, other than a search aircraft he shall:

a) plot the position of the aircraft in distress if given;
b) if possible take a bearing on the transmission;
c) at his discretion while awaiting instructions proceed to the position given in the distress signal.

REMARK:
In addition, compliance is required with communication procedures.

8.4 Procedures for pilot in command observing an accident.

8.4.1 When pilot in command observes that another craft is in distress, he/she shall, unless is unable or the circumstances of the case, consider it unreasonable or unnecessary:

a) Keep in sight the craft in distress until such time as his/her presence is no longer necessary or until he/she is no longer able to remain in the vicinity of the distressed craft;
b) If his/her position is not known with certainty, take such action as will facilitate the determination of it;
c) report to the Rescue Coordination Centre or Air Traffic Unit
Services units as much of the following information is possible:
   - Type of aircraft in distress, its identification and condition;
   - Its position, expressed in geographical coordinates or in distance and the true bearing from a distinctive landmark or from a radio navigation aid;
   - Time of observation expressed in UTC on the 24 hours system;
   - Number of persons observed;
   - Whatever persons have been seen to abandon the aircraft in distress;
   - Apparent physical condition of survivors.

d) Act as instructed by the Rescue Co-ordination Center or appropriate ATS unit.

8.5 Communication

8.5.1 Transmission and acceptance of distress messages within the Angola Search and Rescue Region are handled in accordance with Chapter 5 of Annex 10 to the Convention on International Civil Aviation.

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

8.5.3 The aeronautical telecommunication station serving the aeronautical mobile service maintain a continuous listening watch on their stated frequencies during the published hours of service and will accept and relay, if necessary, any distress message. The frequency 121.5 MHz guarded continuously during the hours of service at Luanda ACC and FIC.

8.5.4 Aircraft engaged in SAR operations may use the prefix PLAYMATE in addition to the normal call sign on RTF. Pilot hearing an aircraft giving this call sign shall maintain RTF silence except in an emergency until such time as it is clear no further message are being immediately passed to or from the aircraft.

9 Automatic Emergency Locator Transmitter (ELBA/ELT)

9.1 General

9.1.1 It is mandatory for all aircraft registered in Angola to be equipped with an automatic type emergency transmitter (ELT).

9.1.2 If the aircraft is equipped with a functioning ELT this shall be shown in the ATS flight plan, item 19 by not crossing out the letters R/and E.

9.1.3 If the ELT has RTF capacity and can be used a portable emergency radio set, this should be shown by not crossing out the relevant letter(s) U for UHF 243 Mhz, V for VHF 121.5 Mhz.

9.2 ELT testing

ELT tests are authorized during the first 5 minutes after any hour. Test must be longer than 3 audible sweeps or 1 second. In exceptional cases, test may be carried out outside this 5 minutes time frame, provided special permission as been obtained from the nearest ATS Unit. Airborne tests are not authorized.

10 Training Operations

10.1 Transmission from ELT approved for training purposes (121.875 and 243.750 MHz) may take place without special permission.

11 Training Operations

11.1 False ELT Alarms

11.1.1 Great caution should be exercised to prevent the inadvertent activation of ELT in the air or while they are being handled on the ground. Accidental or unauthorized activation will generate an ELT signal leading to unnecessary search action.

A false ELT alarm could also interfere with genuine emergency transmissions and hinder or delay the timely location of accident sites. Furthermore, frequent false alarms could result in complacency and decrease the vigorous reaction that must be attached to all ELT signals. The risk of false ELT alarms can be minimized by monitoring 121.5 MHz:

a) in flight, whenever practicable;
b) prior to engine shut-down at the end of each flight;
c) when the ELT is handled during installation or maintenance;
d) when maintenance is being performed in the vicinity of ELT and;
e) when the aircraft is moved by ground crew.

11.1.2 If an ELT signal is heard, check if your own ELT is transmitting inadvertently by momentarily turning it off or listening on some frequencies around 121.5MHZ. (A signal from your own ELT is transmitting, turn it off if possible, and notify the nearest ATS unit about the inadvertent ELT transmission including the time and position .This is absolutely necessary, since every alarm must be considered genuine until proven otherwise, see 12.2 below.

12 Listening watch on 121.5 MHZ and ELT Reporting Procedures

12.1 To make optimal use of the system, it is essential that signals transmitted be heard and reported as soon as possible. Therefore, pilots are encouraged to monitor the frequency 121.5 MHz in flight.

12.2 Whenever practicable with regard to other necessary radio communication (ref. Annex 10 volume II paragraph 5.2.2.1.1.2)

12.3 Upon receiving an ELT signal, carry out the check described in 11.1 above. If signal is established to originate from any other ELT, notify ATS immediately. To the extent possible, report your own position and level when the signal was first heard, and, eventually, when signal was at maximum strength, and when it was last heard.

Remark: If the aircraft has homing equipment, provide the bearing to the emergency signal with each reported position

13 Services

Instructions to be followed in the event of "Flight accident" Pilots and all concerned are hereby required to adhere to the following instructions in the event of "flight accident" in Angola.

14 Notification of accidents

14.1 All accidents which take place between the time any person boards the aircraft with the intention of flight and the time that such person has disembarked and which results in:

a) injuries to any person, fatal or otherwise;
b) fire or suspect of fire in the aircraft;
c) substantial damage in the aircraft;
d) any damage to other property.

14.2 Captains of aircraft involved in such accidents as described in 8.4 above or the person they delegate, shall immediately notify the case to the nearest air traffic services unit as well as to the Civil Aviation Authority headquarters.

14.3 The said notification if required not with standing any previous notification which might have been sent prior to the accident.

14.4 The required notification shall be effected by the quickest available means of telecommunication or transport and shall include:

a) nationality and registration mark of the aircraft;
b) Place of accident;
c) Date and time of the accident;
d) Number of persons on board;
e) Nature of the accident and extent of damage if any;
f) Name of persons killed or injured, if any;
g) Name of aircraft owner;
h) Name of the aircraft captain.

15 Post notification

15.1 The aircraft shall not be touched or any parts removed before investigation into the cause of the accident takes place by the appropriate authorities except when it is deemed necessary for the rescue of human life or property.

15.2 The aircraft's captain shall take every possible measures to prevent any persons from fouling with the aircraft, its wreckage, traces of the accident or any parts thereof.

15.3 Unless he is forced to do otherwise, the captain of the aircraft shall not leave the scene of the accident without guard of duly authorized person.

15.4 The captain of aircraft shall as soon as possible, file with the nearest aerodrome manager a comprehensive report about the accident factual and relevant details, however, in case an accident occurs at an aerodrome, flight crew are required not to leave the aerodrome, before submitting such a report.

16 Removal of the aircraft

The aircraft, its wreckage of debris shall not be removed without the permission of the appropriate Authority of the Civil Aviation.

GEN 4.1 AERODROMES CHARGES

0 General

The charges set out hereunder are common to all aerodromes administered by the ENANA-EP in Angola excepted military aerodromes.

1 Landing Charges

Basis: Maximum take off weight (MTOW) in the Certificate of Airworthiness.

a) International flights

MTOW	AERODROME OF		
	Category 1	Category 2	Category 3
	USD	USD	USD
Up to 25 TONNES	3.75	3.00	2.2
For each additional Tones	7.25	5.80	4.25
Minimum Landing Charges	25.50	18.00	12.50

b) Domestic flights

MTOW	AERODROME OF		
	Category 1	Category 2	Category 3
	USD	USD	USD
Up to 25 TONNES	3.00	2.45	1.95
For each additional Tones	4.85	3.90	2.85
Minimum Landing Charges	18.00	12.50	10.00

e.g. After landing on Category 2 aerodrome, an aircraft which MTOW is 78 Tones shall pay the following charge (CH):
CH = 25 (2.45) + (78 - 25) (3.90)

Surcharge for operations outside normal hours except in cases of emergency is USD 73.03 for each one hour period of extension or part thereof.

The following aircraft are exempted of landing charges:

a) military aircraft;
b) aircraft doing QRF due to technical or meteorological reasons;
c) foreign military or State aircraft on reciprocity basis with the Republic of Angola;
d) aircraft in search and rescue operations, including rescue to catastrophe victims.

1.3 Lightning Charges

Aircraft landing after sunset or in climatically conditions applying lightning shall pay a lightning charge equivalent to 10% of the landing charge. The aircraft exempted from landing charges are exempted from lightning charges as well.

2 Parking Charges

Parking charge is calculated through the following formula on aircraft MTOW basis:

CH = K x W x t
CH = Charge in USD
K = Basic charge value
W = MTOW in tonnes
T = Per hour or part thereof (first 2 hours free)

Table of Basic charge per Parking area			
Parking area	AERODROME		
	Category 1	Category 2	Category 3
	USD	USD	USD
Traffic area	0.11	0.10	-
Maintenance area or other	0.18	0.14	-

The parking free does not entitle to the provision of any service whatsoever, nor does it involve any responsibility from the aerodromes with regard to the safety and security of the aircraft.

A 10% surcharge per hour or fraction thereof shall apply to aircraft remaining in the parking area for a period over 6 hours after landing, except for aircraft with technical deficiencies duly confirmed by the aerodrome management. There shall be an exemption from the parking for aircraft that have been exempted from the landing free, aircraft parking in reserved areas and accidented aircraft while the accident investigation is in course and during the period established by the aerodrome management for their removal.

3 Embarking Charges

Table of embark charges		
Flight Category	AERODROME	
	Aerodromes of	Passengers Category
		National and Foreign residents
International flights	Category 1	USD 20.00
	Category 2	USD 15.00
	Category 3	USD 10.00
Domestic flights	Category 1	USD 10.00
	Category 2	USD 8.00
	Category 3	USD 5.00

The following passengers are exempted from embark charge:

a) Passengers who, for aircraft technical reasons, meteorological or similar contingency are forced to go back to the departure aerodrome;
b) Passengers reembarked for accident reasons;
c) Passengers in direct transit;
d) Passengers less than 2 years old.

4 Cargo Charge

4.1 Cargo charge is applicable uniformly through all Angola aerodromes in accordance with the following basis:

a) Consignments subject to customs clearance at embarkation or disembarkation: USD 0.06 per Kg.
b) Consignments not subject to customs clearance at embarkation: USD 0.05 per Kg.

4.2 Cargo Handling Charges

	Description	Charges
1	IMPORTATION	
1.1	Normal	
	Per Kilogram	0.12
	Minimum	1.78
1.2	DIRECT	
	Per Kilogram	0.07
	Minimum	0.90
1.3	TRANSIT	
	Per Kilogram	0.09
1.4	EXPRESS	
	Per Kg month up to 10 tones	0.43
	10 to 50 tones	0.41
	50 to 100 Tones	0.40
	Over 100 Tones	0.34
	Minimum	17.10
2	EXPORTATION	
2.1	NORMAL	
	Per Kilogram	0.02
	Minimum	1.47
2.2	EXPRESS	
	Per Kilogram	0.17
	Minim	

GEN 4.2 AIR NAVIGATION SERVICES CHARGES

1 Air Navigation Facility Charges

Basis: Maximum take off weight in the Certificate of Airworthiness and distance flown in Luanda FIR. Charges: USD 79.44 per unit, the number of units assigned to a particular flight being determined in accordance with the following Table:

Aircraft weight (Tones)	DISTANCE (KM)			
	0 – 750	751 – 2000	2001 – 3500	Over 3500
Up to 4	Fixed charge of USD 79.44			
5 to 14	Fixed charge of USD 158.88			
15 to 20	2.10	5	12	20
21 to 50	2.13	6	14.4	24
51 to 90	2.15	7	16.8	28
91 to 140	2.20	8	19.2	32
141 to 200	2.25	9	21.6	36
201 to 350	2.30	10.75	25.8	43
350 to 440	2.40	11.5	27.6	46

Aircraft exempted from landing charges are exempted from en-route air navigation charges as well.

2 Extra Aeronautical Charges

The following charges are considered as extra aeronautical charges:

a) Area occupation charge
b) Consumption article charge.

The passenger service charges applicable at Luanda international airport will be invoiced to the operator and collected by the International Air transport Association (IATA) on behalf of Empresa Nacional de Exploração de Aeroporto e Navegação Aérea (ENANA-E.P) at the following address:

International Air Transport Association,
Route de l'Aeroport 33
Geneva, Switzerland
Fax:+ 41(22) 799-2678
AFS:LSGGIATA
SITA:GVALDXB
Telex:415586

3 Adjustment of SADC VSAT charge

Angolan fir airspace, under the authority of civil aviation effective 19 April 2001 all southern African development community-SADC- VSAT network charges attributable to south Africa will be billed and collected by the international air transport association -IATA- on behalf of south Africa which has been designated the agent of south Africa with respect the VSAT network at the following international air transport association.

International Air Transport Association, Route de l´aeroport 33
P O Box 416, CH-1215 Geneva 15 Airport, Switzerland.
Geneva, Switzerland
Fax:+41 (22) 799-2678
AFS:LSGGIATA
SITA:GVALDXB
Telex:415586

using the fir crossing charge 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 flight rate charge per fir crossing will be 9.60 us dollars 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.

As previously agreed, the flat rate has been structured using distance flown in SADC VSAT equipped States´ airspace (excluding distance flown in South Africa Airspace) to best reflect system usage. The distance related charge denominated in United States Dollars (USD) was recently reviewed with a USD 1 decrease in the charge for the short distance rate to be effective as from 1 April 2003, as follows:

Distance SADC VSAT Charge	
1 to 1000 km	USD 12
1001 to 2000km	USD 18
Over 2000km	USD 26

A single distance related charge per flight as tabulated, 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 charge in operating cost, number of additional remote sites, aircraft movements, and other variable cost elements. Notam´s will also be issued by other states/service providers, however, users will only be billed once for each flight etween and over flying SADC VSAT equipped States.

4 SADC VSAT invoicing and Payment Advice

4.1 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 a SADC VSAT satellite communication system. The states currently equipped VSAT are:

- Angola
- Botswana
- Democratic Republic of Congo
- Lesotho
- Malawi
- Mauritius
- Mozambique
- Namibia
- South Africa
- Swaziland
- Tanzania
- Zambia
- Zimbabwe
- Madagascar
- Burundi
- Rwanda

The distance related SADC VSAT charge is incurred once for each flight irrespective of the number of the boundaries of borders crossed.

4.2 Payment terms are 30 (thirty) days from invoice date. Failure to settle accounts within the prescribed period may result in the service being denied
which in actual fact means that aircrafts will be grounded without further notice.

4.3 Primary payment method

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

United Bank of Switzerland
Swift: UBSWCHZH12A
For IATA US $ 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 bank of the cheque or as a bank transfer reference

4.4 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 bellow.

OPTION ONE - Direct ATNS Co. Ltd (Credit Card)
For invoices of USD 250.00 or less, an enclosure to the invoice will provide for payment, of the SADC VSAT portion only, by VISA or Master Card credit card. The credit card will be debited with the South Africa Rand equivalent of the US Dollar amount authorized. 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 authorization. Please ensure that all fields are completed correctly to ensure that the correct credit account is debited. This form should be faxed to ATNS Co. Ltd. Who will then debit the credit card, and advise IATA of settlement.

OPTION TWO- Direct ATNS Co. Ltd (Direct deposits)
For invoices of USD 250.00 or less, payment for the SADC VSAT portion only of the invoice may be made in ZAR (South Africa Rand) to the account of Air Traffic and Navigation Service Co. Ltd (ATNS) in South Africa. The bank account details are account name air traffic and navigation services
VSAT -
VSAT - Current account - Rand -
Bank Ned Bank
Branch Isando
Account no 1454-058-234
Swift code Nedszajj
Important the exchange rate to be used in determining the rand equivalent of the US dollars 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 fax nr+27119748568/+27119610124/+27119610475 who will then advised IATA of settlement.

GEN 5.1 GENERAL CONCERNING LICENCES

1. Responsible Authority

The Angolan Civil aviation Authority establishes the rule for the issue of licences for the following personnel:

a) Crew members
- Private pilot- Airplane
- Commercial pilot- Airplane
- Airline transport pilot-airplane
- Private pilot Helicopter
- Commercial pilot Helicopter
- Airline transport pilot-Helicopter
- Flight engineer

b) Other personnel
- Aircraft maintenance technician- Type I
- Aircraft maintenance technician- Type II
- Air traffic controller
- Flight operation officer/flight dispatcher

2. Requirements

The requirements of age, document, medical fitness, experience, proficiency and knowledge for the issue of licence shall be in compliance with the Annex 1.(Personal Licence) to the Convention on International Civil Aviation and Angola Aviation Safety Regulations in force.

3. Authority to act as a flight crew member

No one is allowed to act as a flight crew member on aircraft registered in Angola unless he is holder of a valid license with appropriate qualification to the function to be exercised in accordance with Angola regulations or he is a holder of a licence validated by Angola.

4. Mandatory Carriage of Licence

The flight crew members should carry their appropriate licenses on board every aircraft engaged in international air navigation. Other personnel covered by the licensing requirements shall carry their licenses while performing their duties.

5. Primary payment method

5.1 Application

The application for validation of a foreign aeronautical licence shall be made by its holder or by his representative and should be sent to the Angola Civil Aviation Authority. A form with biographic details, the original licence and the identity card of the applicant should be annexed to the application.

5.2 Validation

5.2.1 When the Angola Civil Aviation Authority validates a licence issued by another member State of International Civil Aviation Organization in lieu of issuing its own licence, such a validation shall be proven by the issue of a Certificate of Validation of the foreign licence.

5.2.2 The validation shall mention the period of validity which, in any case shall not excess the validity of the original medical Certificate as applicable.

5.2.3 The maximum period time allowed for successive validations is 90 (ninety) days. Validation beyond shall be upon previous request to Angola Civil Aviation Authority.

5.2.4 A tax equivalent to USD 50.00 (fifty) or as applicable is charged for the validation of a foreigner aeronautical licence.

Remark: Specific regulations concerning personnel licensing are published in Angola Aviation Safety Regulations Part 7, 8 and 9.

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ANGOLAN CIVIL AVIATION AUTHORITY

AIP

AERONAUTICAL INFORMATION SERVICE

PART 2

EN-ROUTE (ENR)

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ENR 0.6 **TABLE OF CONTENTS TO PART 2**

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ENR 1.1 GENERAL RULES

1. Applicable rules and procedures

The air traffic rules and procedures applicable to air traffic in the Angolan territory conform to Annexes 2 and 11 to the Convention on International Civil Aviation and those portions applicable to aircraft on the Procedures for Air Navigation Services-Air Traffic Management, and the Regional Supplementary Procedures applicable to the AFI Region, except in the cases indicated in GEN 1-7. All differences have been registered with the International Civil Aviation Organization

1.1 Minimum Safe Height

1) Except when necessary for taking off or landing, or except by special permission from Angola Civil Aviation Authority, aircraft shall be flown:
   a) Over built-up areas or over an open-air assembly of persons at heights which shall not be less than 1000 feet above the highest obstacle within a radius of 2000 feet from the aircraft;
   b) When elsewhere than specified in subparagraph (a) above, at a height not less than 500 feet above the ground or water unless the flight can be made without hazard or nuisance to persons or property on the ground or water.
2) Except when necessary for take-off or landing an aircraft shall, at night, in IMC or when operated in accordance with IFR be flown:
   a) If within an area determined by the competent ATS authority, at a height of at least 1000 feet above the highest obstacle within that area and in accordance with such procedure as the competent ATS authority may determine; or
   b) If elsewhere than in an area contemplated in paragraph (a), at a height of at least 1500 feet above the highest obstacle located within five nautical miles of the aircraft in flight.

2 Dropping of Objects

Except in an emergency or unless granted special permission by Angola Civil Aviation Authority no article shall be dropped from an aircraft in flight other than in form of:

a) Fine sand or water and similar objects used as ballast;
b) Chemical substances for the purpose of spraying or dusting.

3 Acrobatic flying

3.1 Acrobatic flights are only permitted in visual meteorological conditions and with the explicit consent of all person on board.

3.2 No aircraft shall be flown acrobatically so as to endanger air traffic. Except special permission from Angola Civil Aviation authority, acrobatic flights are prohibited:

a) at height of less than 450m (1500 feet);
b) over cities, any populous area or public gathering;
c) over airports.

4 Towing and advertising flights

A pilot in command of an aircraft in flight shall not permit anything to be towed by the aircraft, except in accordance with requirements prescribed by Angola Civil Aviation Authority.

5 Times and units of measurement

The units of measurement used in connection with all air traffic services in the Republic of Angola are in compliance with the 4th Edition of Annex 5.

6 Airspace structure

6.1 General provisions for separation of controlled traffic

6.1.1 Vertical or horizontal separation shall be provided:

a) between all flights in Class A and B airspace;
b) between IFR flights in Class C, D and E airspace;
c) between IFR flights and VFR flights in class C airspace;
d) between IFR flights and special VFR flights; and
e) between special VFR flights ;

Except, for the cases under a), b) and c) above during the hours of daylight when flights have been cleared to climb or descend subject to maintaining own separation and remaining in visual meteorological conditions.

6.1.2 No clearance shall be given to execute any manoeuvre that would reduce the spacing between two aircraft to less than the separation minimum applicable in the circumstances.

6.1.3 Larger separations than specified minima should be applied whenever wake turbulence or exceptional circumstances such as unlawful interference call for extra precautions. This should be done with due regard to all relevant factors so as to avoid impending the flow of air traffic by the application of excessive separations.

6.2 The vertical Separation Minimum

6.2.1 The Vertical Separation Minimum (VSM) within Luanda FIR is 300 m (1000ft) below FL 290 and 600m (2000ft) at or above this level.

6.2.2 Vertical Separation during ascent or descent.

a) Pilots in direct communication with each other may, with their concurrence, be cleared to maintain a specified vertical separation between their aircraft during ascent or descent.

6.3 Horizontal Separation

6.3.1 Lateral separation of aircraft at the same level is obtained by requiring operation on different routes or in different geographical locations as determined by visual observation, by use of navigation aids or by use of satellite based navigation equipment.

6.3.2 Lateral separation may be achieved by means of the following:

1) Geographical separation, i.e. separation positively indicated by position reports over different geographical locations as determined visually or by reference to a navigation aid.

2) Track separation between aircraft using the same navigation aid or method.

3) By requiring aircraft to fly on specified tracks which are separated by a minimum amount appropriate to the navigation aid or method employed as follows:

   a) VOR: at least 20 degrees and at a distance of 37 Km (20 NM) or more from the facility.

   b) NDB: at least 30 degrees and at a distance of 37 Km (20 NM) or more from the facility.

   c) Dead reckoning (DR); Separation is deemed to exist when tracks diverging by at least 45 degrees and at a distance of 37 Km (20 NM) or more from the point of intersection of the tracks, this point being determined either visually or by reference to a navigation aid.

6.4 Longitudinal separation

Longitudinal separation shall be applied so that the spacing between the estimated positions of the aircraft being separated is never less than a prescribed minimum.

Longitudinal separation shall be established by requiring aircraft to depart at a specified time, to lose time to arrive over a geographical location at a specified time, or to hold over a geographical location until a specified time.

Longitudinal time separation normally applied between aircraft at the same level on the same track in Luanda FIR is 20 minutes.

Longitudinal separation minima based on the mach number technique:

Jet aircraft shall maintain the mach number approved by ATC and shall obtain previously clearance from ATC prior any change thereof. If it is essential any temporary change of mach number (e.g. due to turbulence), the ATC shall be notified immediately after the change is made.

If due to aircraft performance it is not possible to maintain the last assigned mach number during the climb or descent enroute, the pilot shall inform the ATC upon requesting clearance to climb or descend.

The mach number technique is applicable as follows:

a) All aircraft involved shall report passed over the same reporting point and are following the same track or continuously diverging tracks, until another form of separation is assured, or

b) If the aircraft did not report over the same reporting point, it is possible to establish by radar or another effective means, an appropriate time interval from the last common point from which they will be following the same track or continuously diverging tracks;

The longitudinal separation minima between jet aircraft flying on the same track, maintaining cruising level, climbing or descending, will be:

Ten minutes, or
Nine to five minutes if:

The preceding aircraft is maintaining a faster mach number than the following aircraft the required separation shall be according the table below:

1) Nine minutes if the preceding aircraft is maintaining a mach number 0,02 faster than the following.

2) Eight minutes if the preceding aircraft is maintaining a mach number 0,03 faster than the following.

3) Seven minutes if the preceding aircraft is maintaining a mach number 0,04 faster than the following.

4) Six minutes if the preceding aircraft is maintaining a mach number 0,05 faster than the following.

5) Five minutes if the preceding aircraft is maintaining a mach number 0,06 faster than the following.

Once the minimum of ten minutes longitudinal separation based on the mach number technique is provided, the preceding aircraft shall maintain a mach number equal or faster than the following.

Note: In all other cases the separation minima shall be as prescribed in PANS-ATM (ICAO Doc 4444-ATM 501/12 Chapter V).

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ENR 1.2 VISUAL FLIGHT RULES

1. VFR flights shall be conducted within Luanda FIR in accordance with the following conditions:
1.1 VFR flights are subject to general flight rules, as specified in ICAO Annex 2 Chapter 4.
1.2 VFR flights shall comply with the provision of Air Traffic Control Service:

a) when operated within Classes D airspace;
b) when forming part of aerodrome traffic at controlled aerodromes; or
c) when operated as special VFR flights.

1.3 Unless authorized by the appropriate ATS authority, VFR flights shall not be operated:

a) between sunset and sunrise;
b) above FL 200;
c) at transonic and supersonic speeds.

1.4 Except when necessary for take-off or landing, except by permission from the ATS units, VFR flights shall not be flown:

a) Over congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 1000 FT (300M) above the highest obstacle within a radius of 600M from the aircraft;
b) Elsewhere than specified in 1.4 a), above at a height less than 500 FT (150M) above the ground or water.

2. Controlled airspace

2.1 An aircraft may be operated under VFR provided that it maintains a horizontal distance of at least 1.5 KM and a vertical distance of 1000 FT (300M) from cloud and has flight visibility of:

a) 8 Km at or above 10000 FT (3050M) AMSL; o
b) 5 Km below 10000 FT (3050M) AMSL

2.1.1 A flight may be conducted in accordance with VFR:

a) at and below 3000 FT (900M) AMSL or 1000 FT (300M) above terrain whichever is higher provided that it remains clear of clouds and in sight of the ground or water and in flight visibility of less than 5 Km
b) above 3000 FT (900M) AMSL or above 1000 FT (300M) above terrain, within ever is higher provided that the condition in 1.2.1 is not met.

3 Outside controlled airspace

3.1 A flight may be conducted in accordance with VFR:

a) at and below 3000 FT (900M) AMSL or 1000 FT (300M) above terrain which ever is higher provided that it remains clear of clouds and in sight of the ground or water and in flight visibility of less than 5 Km
b) above 3000 FT (900M) AMSL or above 1000 FT (300M) above terrain, within ever is higher provided that the condition in 1.2.1 is not met.

REMARK

Helicopters may operate with a flight visibility below 1500 m if maneuvered at a speed that will give adequate opportunity to observe other traffic or any obstruction in time to avoid collision.

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ENR 1.3 INSTRUMENTS FLIGHT RULES

1 Rules applicable to all IFR flights

1.1 General

1.1.1 A flight conducted above flight level 195 shall be flown in compliance with Instrument Flight Rules.
1.1.2 Aircraft shall be flown in accordance with the Instrument Flight Rules whenever they are unable to comply with conditions required for VFR flight by day or at all times when operating by night except when permission has been granted for special VFR flight within a control zone.
1.1.3 Aircraft equipment - Aircraft flown in accordance with Instrument Flight Rules shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

2.2 Minimum levels

1.3 Except when necessary for take-off or landing, an IFR flight shall be flown at a level which is not below the minimum flight altitude established, or where no such minimum flight altitude has been established:

a) Over high terrain or in mountainous areas, at a level which is at least 2000 FT (600M) above the highest obstacle located within 8 Km of the estimated position of the aircraft;
b) Elsewhere than as specified in a), at a level which is at least 300 M (1000 FT) above the highest obstacle located within 8 Km of the estimated position of the aircraft.

1.4 Change from IFR flight to VFR flight

1.4.1 An aircraft conducted in compliance with instrument flight rules desiring to change to compliance with visual flight rules, if a flight plan was submitted, shall notify the appropriate air traffic services unit specifically that the IFR flight is canceled and communicate there to the changes to be made to its current flight plan.
1.4.2 When an aircraft operated in accordance with IFR is flown in or encounters visual meteorological conditions, it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

2 Rules applicable to IFR flights within controlled airspace.

2.1 An IFR flight operated in controlled airspace shall comply with the provisions of Annex 2, Chapter 3, Part 3.6 as follows:

a) Submit a flight plan;

b) Obtain air traffic control clearances prior to operating a controlled flight and request such clearance through the submission of a flight plan to an ATC unit;

c) Adhere to the current flight plan or the applicable portion of a current flight plan unless a request for a change has been made and clearance obtained from the appropriate air traffic control unit, or an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, the appropriate ATC unit shall be notified of the action taken and that this action has been taken under emergency situation;

d) Report position to the appropriate air traffic service unit, as soon as passing each designated compulsory reporting point, the time and level together with any other required information. Additional reports may be made when requested by the appropriate ATS unit;

e) Maintain continuous listening watch as the appropriate radio frequency and establish two-way communication as necessary with the appropriate ATC unit.

2.2 Position reporting procedures.

2.2.1 On routes defined by designated significant points, position reports shall be made when over, as soon as possible after passing each compulsory reporting point. Additional reports over other points may be requested by the ATS unit concerned when so required for air traffic services.

2.2.2 On routes not defined by designated significant points, position reports shall be made as soon as possible after the first half hour of flight and hourly intervals thereafter.

2.2.3 Contents of position reports:

a) aircraft identification;
b) position;
c) time;
d) flight level;
e) next position and time over;
f) ensuing significant point.

2.2.4 Aircraft on VFR flights shall make RTF contact with the appropriate ATS unit on the relevant frequency in accordance with the following procedures:

a) as soon as possible after departure;
b) when changing frequency;
c) when destination is insight;
d) on flights of sufficient duration an "Operations normal" call or a position report shall be made at intervals of not more than one hour;
e) in the event of failure to establish contact, pilots should broadcast their reports.

3 Communications

Controlled flights and certain IFR flights operating outside controlled airspace to maintain a continuous listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

4 Radio communications failure procedures

The following procedures are in accordance with ICAO annex 2 paragraph 3.6.5
Flights in visual meteorological conditions (VMC) The aircraft shall:

a) Continue to fly in VMC.
b) Land at the nearest suitable aerodrome and;
c) Report arrival by the most expeditious means to the appropriate ATS unit

REMARKS

1) The above procedures are applicable to all flights inside Luanda FIR
2) Aircraft, when forming part on the aerodrome traffic at controlled, shall keep close watch for any instructions as may be issued by visual signals.

Flights in instrument meteorological conditions (IMC)

If instrument meteorological conditions prevail, or when weather conditions are such the it does not appear feasible to complete the flight in accordance to flight plan, the aircraft shall:

a) Proceed according to the last ATC clearance received and acknowledged.
b) Maintain the last assigned flight level for twenty minutes, and thereafter climb to the flight level indicated on the current flight plan.
c) Proceed according to current flight plan to the aerodrome of intended landing and when required to ensure compliance with b) below, hold over this aid until commencement of descent;
d) Arrange flight to arrive over the significant points at the estimated times calculated from the current flight plan and, transmit blind all position reports at such points.
e) Commence descent from navigational aid specified in c) at, or as close as possible to, the last acknowledged expected approach time or estimated time of arrival calculated from the current flight plan.
f) Complete a normal instrument approach procedure as specified for the designated navigational aid; and
g) Land if possible within 30 minutes after the last acknowledged expected approach time or estimated time of arrival specified in c).
h) If unable to land within the time interval specified in g) above, leave the area to land with visual reference in a suitable aerodrome, then communicate to the appropriate ATS unit by the most expeditious means.

The provision of air traffic control service to other flights operating in the airspace concerned will be based on the assumption that an aircraft expected to maintain last assigned and acknowledged cruising level(s) to the point(s) specified in the clearance and thereafter the cruising level(s) in the current flight plan.

If the radio communication failure occurs before the aircraft has establish RTF contact with any ATS unit, the pilot flying above FL195 shall select and maintain a VFR flight level according to the semi-circular rule applicable to the magnetic track of the aircraft.

The provision of air traffic control service to other flight operating in the airspace concerned will be based on the assumption that an aircraft experiencing radio communication failure will comply with the above.

If the radio communication failure occurs when the aircraft is flying to Luanda airport, the pilot in command shall after reach the terminal navigational aid (VNA/LU), intercept and proceed to the radial/track 270º, fly outbound during five minutes and then start descend to the transition altitude, make a right turn to return to the navigational aid and start the instrument approach procedure for landing.

All aircrafts operating inside Luanda (FNAN) FIR must carry at least 1 set of operative radios for radiotelephony, which enable the pilot to establish two way communication with ATS on the notified frequencies.

ENR 1.4 ATS AIRSPACE CLASSIFICATION

1 ATS airspace classes in Luanda FIR Controlled airspace

1.1 Class A airspace

a) Luanda UTA

b) All ATS routes in Luanda TMA above FL 145

1.2 Class B airspace - NIL

1.3 Class C airspace - NIL

a) Luanda CTR

1.4 Class D airspace

a) Cabinda CTR

1.5 Class E airspace

Luanda TMA below FL 145

1.6 Class F airspace - NIL

1.7 Class G airspace

All airspaces outside Luanda TMA and Cabinda CTR

ATS Airspace Classification

Class	Type of flight	Separation provided	Service provided	VMC visibility and distance from cloud minima?	Speed limitation?	Radio communication requirement	Subject to an ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Not applicable	Continuous two-way	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Not applicable	Continuous two-way	Yes
	VFR	All aircraft	Air traffic control service	8 KM at and above 3 050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL Clear of clouds	Not applicable	Continuous two-way	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Not applicable	Continuous two-way	Yes
	VFR	VFR from IFR	Air traffic control service for separation from IFR;	8 KM at and above 3 050 M (10 000 FT) AMSL 1 500 M horizontal; 300 M vertical distance from cloud	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	Yes
D	IFR	IFR from IFR	Air traffic control service including traffic information about VFR flights (and traffic avoidance advice on request)	Not applicable	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	Yes
	VFR	Nil	Traffic information between VFR and IFR flights (and traffic avoidance advice on request)	8 KM at and above 3 050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL 1 500 M horizontal; 300 M vertical distance from cloud	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	Yes

Class	Type of flight	Separation provided	Service provided	VMC visibility and distance from cloud minima?	Speed limitation?	Radio communication requirement	Subject to an ATC clearance
E	IFR	IFR from IFR	Air traffic control service and traffic information about VFR flights as far as practical	Not applicable	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	Yes
	VFR	Nil	Traffic information as far as practical	8 KM at and above 3 050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL 1 500 M horizontal; 300 M vertical distancefrom cloud	250 KT IAS below 3 050 M (10 000 FT) AMSL	No	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service	Not applicable	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	8 KM at and above 3 050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL 1 500 M horizontal; 300 M vertical distancefrom cloud At and below 900 M AMSL above terrain whichever is higher – 5 KM???, clear of cloud and in sight of ground or water	250 KT IAS below 3 050 M (10 000 FT) AMSL	No	No
G	IFR	Nil	Flight information service	Not applicable	250 KT IAS below 3 050 M (10 000 FT) AMSL	Continuous two-way	No
	VFR	Nil	Flight information service	8 KM at and above 3 050 M (10 000 FT) AMSL 5 KM below 3 050 M (10 000 FT) AMSL 1 500 M horizontal; 300 M vertical distance from cloud At and below 900 M AMSL above terrain whichever is higher – 5 KM???, clear of cloud and in sight of ground or water	250 KT IAS below 3 050 M (10 000 FT) AMSL	No	No

When the height of the transition altitude is lower than 3 050 M (10 000 FT) AMSL, FL 100 should be used in when so prescribed by the appropriate ATS authority:

1. lower flight visibilities to 1 500 M may be permitted for flights operating:
   a) at speeds that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
   b) in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low traffic volume and for aerial work at low levels;
2. helicopters may be permitted to operate in less than 1 500 M flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES

1 General

1.1 The holding, approach and departure procedures in use conform to those contained in PANS-OPS ICAO Doc 8168-OPS/611 Vol. 1.
1.2 Holding areas have been calculated for levels up to 20000 FT and speeds up to 240 Kt except or those depicted on instrument approach charts which have been calculated for levels up to 14000 FT and speeds up to 230 Ft for category C and D aircraft. Aircraft wishing to hold at higher levels or speeds require clearance to do so from the relevant ATC unit.

2 Arriving and over flying aircraft

2.1 Aircraft desiring to fly in accordance with instrument flight rules within controlled airspace during the hours of operations of the relevant ATS units shall request ATC clearance from the appropriate ATC units. Request by radiotelephony should be made when at least 10 minutes out. The following information should be passed on initial contact:

a) aircraft identification and type;
b) present altitude, position and flight conditions;
c) estimated time over position of entry into the control zone and estimated time over the main navigational aids;
d) aerodrome of destination and true air speed.

2.2 Instrument approach procedures are depicted in AD2

3 Departing flights

3.1 IFR flights departing from controlled aerodromes will receive initial ATC clearances containing the clearance limit from the local aerodrome tower. The clearance limit will normally be the aerodrome of destination.
3.2 Instrument departure procedures are depicted in ENR4.

Flight level (FL)	Category A and B aircraft	Jet aircraft	
		Normal conditions	Turbulence conditions
Up to FL 140 (4 250 M) inclusive	170 KT	230 KT (425 KM/H)	280 KT (520 KM/H) or Mach 0.8, whichever is less
Above FL 140 (4 250 M) to FL 200 (6 100 M) inclusive	240 KT (445 KM/H)		
Above FL 200 (6 100 M) to FL 340 (10 350 M) inclusive	265 KT (490 KM/H)		
Above FL 340 (10 350 M)	Mach 0.83		Mach 0.83

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ENR 1.6 RADAR SERVICES AND PROCEDURES

1 Primary radar:

NIL

2 Secondary radar:

NIL

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ENR 1.7 ALTIMETER SETTING PROCEDURES

1. Introduction

The altimeter setting procedures in use generally conform to those contained in ICAO Doc 8168 Vol. I, Part 6 and are given full bellow.

Transition altitudes for all aerodromes are given in the tabulation in AD.

QNH reports and temperature information for use in determining adequate terrain clearance is available on request from air traffic service units. QNH values are given in whole hectopascals.

2. Basic Altimeter Setting Procedures

2.1 General

1) A transition altitude is specified for each aerodrome. No transition altitude is less than 900 meters above aerodrome.
2) Vertical positioning of aircraft at or below the transition altitude is expressed in terms of altitude. Whereas, such positioning at or above the transition level is expressed in terms of flight levels. While passing through the transition layer, vertical positioning is expressed in terms of altitude when descending, and in terms of flight levels when ascending.
3) Flight level zero is located at the atmospheric pressure level of 1013.2 hPa (29.92 inches). Consecutive flight levels are separated by a pressure interval corresponding to 500 feet (152.4 meters) in the Standard Atmosphere.

REMARK:

Examples of the relationship between flight levels and altimeter indications are given in the following table, the metric equivalents being approximate:

Flight level number	Altimeter indication	
	Feet	Metres
10	1 000	300
15	1 500	450
20	2 000	600
50	5 000	1 000
100	10 000	3 050
150	15 000	4 440
200	20 000	5 001

2.2 Take-off and climb

2.2.1 A QNH altimeter setting is made available to aircraft in taxi clearance prior to take-off.

2.2.2 2.2.2 Vertical positioning of aircraft during climb is expressed in terms of altitudes until reaching the transition altitude above which vertical positioning is expressed in terms of flight levels.

2.3 Vertical separation — en route

2.3.1 Vertical separation during en-route flight shall be expressed in terms of flight levels at all times “during an IFR flight and at night”.

2.3.2 IFR flights, and VFR flights above 900 m (3 000 ft), when in level cruising flight, shall be flown at such flight levels, corresponding to the magnetic tracks shown in the following table, so as to provide the required terrain clearance:

	000º-179º		180º-359º	
	IFR	VFR	IFR	VFR
Flight level number	10		20	
	30	35	40	45
	50	55	60	65
	70	75	80	85
	90	95	100	105
	.....	etc.	.....	etc.
	270		280	
	290		310	
	330		350	
	etc.		etc.	

REMARK:

Some of the lower levels in the above table may not be usable due to terrain clearance requirements.

2.4 Approach and landing

2.4.1 A QNH altimeter setting is made available in approach clearance and clearances to enter the traffic circuit.

2.4.2 A QFE altimeter setting clearly identified as such, is made available in approach and landing clearance on request.

2.4.3 Vertical positioning of aircraft during landing approach is controlled by reference to flight levels until reaching the transition level below which vertical positioning is controlled by reference to altitudes.

2.5 Missed approach

The relevant portions of 1.1.2, 1.2. and 1.4 shall be specified to the case of missed approach.

3 Description of altimeter setting region

NIL

4 Procedures applicable to operators (Including Pilots)

4.1 Flight planning

4.1.1 The levels at which a flight is to be conducted shall be specified in a flight plan:

a) in terms of flight levels if the flight is to be conduced at or above the transition level, and;

b) in terms of altitude if the flight is to be conduced in the vicinity of an aerodrome and or below the transition altitude.

4.1.2 The flight level or levels selected for a flight:

a) should ensure adequate terrain clearance at all points along the route to be flown;

b) should satisfy air traffic control requirements; and

c) should be compatible with the application of the semi-circular rule of Annex 2.

8 Tables of cruising levels

The cruising levels to be observed when so required are as follows:

a) in areas where, on the basis of regional air navigation agreement and in accordance with conditions specified therein, a vertical separation minimum (VSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive:?

TRACK??											
From 000 degrees to 179 degrees						From 180 degrees to 359 degrees					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
FL	Altitude		FL	Altitude		FL	Altitude		FL	Altitude	
	Metres	Feet		Metres	Feet		Metres	Feet		Metres	Feet
-90			–	–	–	0			–	–	–
10	300	1 000	–	–	–	20	600	2 000	–	–	–
30	900	3 000	35	1 050	3 500	40	1 200	4 000	45	1 350	4 500
50	1 500	5 000	55	1 700	5 500	60	1 850	6 000	65	2 000	6 500
70	2 150	7 000	75	2 300	7 500	80	2 450	8 000	85	2 600	8 500
90	2 750	9 000	95	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110	3 350	11 000	115	3 500	11 500	120	3 650	12 000	125	3 800	12 500
130											
150	4 550	15 000				160	4 900	16 000			
170	5 200	17 000				180	5 500	18 000			
190	5 800	19 000				200	6 100	20 000			
210	6 400	21 000				220	6 700	22 000			
230	7 000	23 000				240	7 300	24 000			
250	7 600	25 000				260	7 900	26 000			
270	8 250	27 000				280	8 550	28 000			
290	8 850	29 000				310	9 450	31 000			
330	10 050	33 000				350	10 650	35 000			
370	11 300	37 000				390	11 900	39 000			
410	12 500	41 000				430	13 100	43 000			
450	13 700	45 000				470	14 350	47 000			
490	14 950	49 000				510	15 550	51 000			
etc.	etc.	etc.				etc.	etc.	etc.			
Except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of 300 m (1 000 ft) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.											
Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.											

9 Application of Semi-Circular Rules

All cruising flights levelled at more than 3000 ft above terrain whether VFR or IFR should maintain an appropriate level in accordance with the semi-circular system of flight levels.

Within controlled airspace, it may be necessary for the appropriate ATC unit to assign levels other than semi-circular system levels in order to ensure minimum standard separation.

When compliance with VFR can not be maintained at an appropriate level, an aircraft may be flown at a more suitable level provided that the appropriate ATS unit notified about the intention to change, or when within controlled airspace, a clearance is obtained.

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ENR 1.8 REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030)

No differences exist between national regulation and the regional supplementary procedures (Doc 7030).
Report GEN. 1.7

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ENR 1.9 AIR TRAFFIC FLOW MANAGEMENT

NIL

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ENR 1.10 FLIGHT PLANNING

1. Procedures for the submission of a flight plan

A flight plan shall be submitted to ATC by the pilot-in-command or the operator in respect of the following flights:

a) any flight or portion thereof to be provided with air traffic control service;
b) flights on all controlled airspaces whether IFR or VFR;
c) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate the provision of flight information, alerting and search and rescue services;
d) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATS authority to facilitate co-ordination with appropriate military units or with air traffic services units adjacent states in order to avoid the possible need of interception for the purpose of identification;
e) any flight engaged in public services;
f) any flight across international borders.

1.2 Time of submission

The flight plan shall be submitted by the pilot-in-command, the operator or its representative at least sixty (60) minutes before the estimated off block time, or, if submitted during flight, at a time which will ensure its receipt by the appropriate air traffic services units at least ten (10) minutes before the aircraft is estimated to reach:

a) the intend point of entry into a control area or control zone;
b) the point of crossing an ATS route.

13 Place of submission

a) Flight plan shall be submitted at Luanda Air Traffic Services Reporting Office (FNLUZPZX), or at ATS unit of the aerodrome of departure;
b) In the absence of such unit at the aerodrome of departure, a flight plan shall be submitted by telephone or by any communication means available to the nearest ATS unit;
c) In the event of a delay of thirty (30) minutes in excess of the estimated off-block time, the flight plan for any aircraft intending to depart for an international flight should be amended, or a new flight plan submitted and the old flight plan canceled, whichever is applicable.
d) For aircrafts engaged in domestic flights the time mentioned in c) above is extended to one (1) hour.

2.3 Cancellation of an IFR flight plan

a) A pilot-in-command may change from IFR flight plan to a VFR flight plan by reporting "CANCELLING MY IFR FLIGHT PLAN " when weather conditions indicate that the remainder of the flight can be conducted under VFR;
b) ATC will acknowledge receipt, "IFR FLIGHT PLAN CANCELED AT.... (time)".

2.4 Contents of a flight plan

A flight plan shall comprise information regarding such of the following items as are considered relevant by the appropriate ATS authority:

- Aircraft identification;
- Flight rules and type of flight;
- Number and type (s) of aircraft and wake turbulence category;
- Equipment;
- Departure aerodrome;
- Estimated off-block time;
- Cruising speed(s);
- Route to be followed;
- Destination aerodrome and total estimated elapsed time;
- Alternate aerodrome(s) ;
- Fuel endurance;
- Total number of persons on board;
- Emergency and surval equipment;
- Other information.

2.5 Except as prescribed in the following paragraph, the pilot-in-command shall ensure that the aircraft adheres to the current flight plan filed for a controlled flight unless a request for change has been made and accepted by ATC unit having jurisdition over the controlled airspace in wihch the aircraft as operating or unless an emergency situation arises which necessitates immediate action in which event, the responsible air traffic control unit shall, as soon as circumstances permit, be notified of the action taken and that this action was taken under emergency authority.

2.6 In the event that a controlled flight inadvertently deviates it's current flight plan, the following action shall be taken:

a) If the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable;
b) If the average true airspeed at cruising level between reporting points varies or is expected to vary from that given in the flight plan, by plus or minus 5 percent of the true airspeed, from that given in the flight plan, the appropriate air traffic services units shall be so informed as soon as possible.
c) If the estimated time at the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of three (3) minutes from that notified to air traffic services, a revised estimate time shall be notified to the responsible air traffic services unit as soon as possible.

2 Repetitive flight plan system

2.1 General

The procedures concerning the use of Repetition Flight Plans (RPL) conform to ICAO Doc 7030 and the PANS-RAC, 12th edition, RPL lists relating to flights out of and over flying the Luanda FIR shall be submitted at least two weeks in advance, in duplicate, to the following address:

Postal address:

Air Traffic Services Repotting Office
P.O.BOX 841
Luanda Angola
Fax: 244-2-350678
AFS: FNLUZPZX
Email: enana@snet.ca.ao

RPL lists shall be replaced in their entirely by new lists prior to the introduction of the summer and winter schedules. RPL will not be valid for any flight unless all ATC authority concerned with the flight plan agreed to accept it.

2.2 Incidental changes and cancellation of RPL relating to departures from Angola aerodromes shall be notified as early as possible and not later than 30 minutes before departure from Luanda on Tel.244-2-350678. Permanent changes to RPL require the submission of a new RPL, so as to reach the AIS Office at least 7 days prior to the change becoming effective.

2.3 Delay

When a specific flight is likely to encounter a delay of 30 minutes or more in excess of the departure time stated in the RPL, the ATS unit serving the departure aerodrome shall be notified immediately. Delays relating to departures from aerodromes shall be notified to Luanda Air Traffic-Services Reporting Office and the procedures mentioned in item 3 below shall be applied.

REMARK:
Failure to comply with these procedures may result in the automatic cancellation of the RPL for that specific flight at one or more of the ATS units concerned.

2.4 ATS messages

For a flight operated on a RPL, no flight Plan Message (FPL) will be transmitted. Departure messages (DEP) or delay messages (DLA) relating to such flights will not be transmitted to ATS units outside the Luanda FIR.

3 Changes to the submitted Flight Plan

3.1 All changes to a flight plan submitted for an IFR flight or controlled VFR flight shall be reported as soon as possible to the appropriate ATS unit;

3.2 In the event of a delay in departure:

a) before the expiry of the above time, (Item 2-3) the operator can request directly from Luanda ATS Reporting Office to amend the first departure time at least 1 hour in advance and another 30 minutes delay may be accepted;

b) In all cases flight plan will be automatically canceled 3 hours after the first departure time and a new flight plan is duly required.

REMARK:
If a delay in departure of a controlled flight is not properly reported, the relevant flight plan data may no longer be readily available to the appropriate ATS unit when a clearance is ultimately requested, which will consequently result in extra delay for the flight.

3.3 Whenever a flight, for which a flight plan has been submitted, is canceled, the appropriate ATS unit shall be informed immediately.

3.4 Changes to a current flight plan for a controlled flight during flight shall be reported or requested, subject to the provisions in ICAO Annex 2, 3.6.2 (Adherence to flight plan.).

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ENR 1.11 ADDRESSING OF FLIGHT PLAN MESSAGES

Flight movement messages relating to traffic into or via the Luanda FIR shall be addressed as stated below in order to warrant correct relay and delivery.

REMARK:

Flight movement messages in this context comprise flight plan messages, amendment messages relating thereto and flight plan cancellation messages (ICAO PANS-RAC, Doc 444, Part VIII, 2.1.1.3 refers)

Category of flight (IFR, VFR or both)	Route (into or via FIR and/or TMA)	Message address
1	2	3
IFR flights	Into or via Luanda FIR and, in addition, for flights: - Within Luanda FIR above FL 245 - in to Luanda TMA - via Luanda TMA	FNLUZQZX / FNLUZPZX
VFR flights	All flights	FNLUZAZX / FNLUZPZX
All flights	Angolan controlled aerodromes	FNLUZPZX / FNLUZQZX

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ENR 1.12 INTERCEPTION OF CIVIL AIRCRAFT

REMARK:
The word interception in this context does not include intercept and escort service provided, to an aircraft in distress, in accordance with the Search and rescue Manual (Doc. 7373).

1. General

1.1 The following interception procedures and visual signals apply within the territory of Angola in the event of interception of an aircraft.

1.2 Interception of an aircraft may have to be undertaken for the purpose of identification or navigational guidance, when no other method is available. Such an interception will be carried out by military aircraft in the following procedures referred to as "intercepting aircraft"

2 Identification

When considered necessary by the appropriate military unit as last resource and for the purpose of identification, an aircraft may be intercepted. Normally, the following interception method, confirming to the recommended procedure laid down in ICAO Annex 2, Attachment A, will be applied.

Phase I- The intercepting aircraft will approach the intercepted aircraft from astern and normally take up a position on the left side of the intercepted aircraft, at the same level, not closer than 300 m, and within view of the pilot of the intercepted aircraft. After speed and position have been established, the intercepting aircraft will, if necessary, proceed with Phase II of the procedure.

Phase II- The intercepting aircraft will close in gently on the intercepted aircraft at the same level, stopping a distance no closer than absolutely necessary to obtain the information needed. The intercepting aircraft will use every possible precaution to avoid starting the flight crew or the passengers of the intercepted withdraw form the vicinity of the intercepted aircraft as outlined in Phase III.
Phase III- The intercepting aircraft will break away the intercepted aircraft in a shallow dive. During the whole procedure, any other participing aircraft will remain well clear of intercepted aircraft, normally above and behind.

3 Action by intercepted aircraft

3.1 An aircraft which is intercepted by another aircraft shall immediately:

a) follow the instruction given by the other aircraft intercepting and responding to visual signals in accordance with the specification on GEN 3.6-3 and 3.6-4;
b) notify, if possible, the appropriate air
c) traffic services units;
d) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; if no contact has been established and if applicable, repeat this call on the emergency frequency 243 MHz;

REMARK:
The following call sign should be used:
Intercepting aircraft: INTERCEPTOR + (tail number if readable)
Intercept control unit: INTERCEPT CONTROL
Intercepted aircraft: INTERCEPTED AIRCRAFT+ (Identification)

3.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals or by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual or radio instruction given by the intercepting aircraft, respectively.

4 Guidance procedures

REMARK:
The term guidance interception denotes interception of aircraft by intercepting aircraft for the purpose of providing navigational guidance.

4.1 If following the identification manoeuvres in phase I and II above, it is considered necessary to intervene in the navigation of intercepted aircraft, this will, if practicable, be carried out by radio (directly between the intercepting aircraft and intercepted aircraft, or via ATS). If this is not practicable, the intervention will be carried out by the intercepting aircraft, applying to the following method, conforming to ICAO Annex 2 Attachment A.

The intercepting aircraft will take up position, normally, to the left of and slightly forward of the intercepted aircraft, to enable the pilot of the intercepted aircraft to see the signals given. (Meteorological conditions, terrain, or factors may occasionally necessitate taking up a position to the right of the aircraft).

4.2 If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in the following table:

Phrases for use by INTERCEPTING aircraft		
Phrase	Pronunciation(1)	Meaning
CALL SIGN(call sign)(2)	*KOL SA-IN(call sign)*	My call sign is (call sign)
WILCO	*VILL-KO*	Understood. Will comply
CAN NOT	*KANN NOTT*	Unable to comply
REPEAT	*REE-PEET*	Repeat your instruction
AM LOST	*AM LOSST*	Position unknown
MAYDAY	*MAYDAY*	I am in distress
HIJACK(3)	*HI-JACK*	I have been hijacked
LAND(place name)	*LAAND(place name)*	I request to land at (place name)
DESCEND	*DEE-SEND*	I require descent
CALL SIGN	*KOL SA-IN*	What is your call sign?
FOLLOW	*FOL-LO*	Follow me
DESCEND	*DEE-SEND*	Descend for landing
YOU LAND	*YOU LAAND*	Land at this aerodrome
PROCEED	*PRO-SEED*	You may proceed

(1) Syllables to be emphasized are printed in *emphasised* letters.

(2) The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

(3) Circumstances may not always permit, nor make desirable, the use of the phrase “HIJACK”.

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY-Rocking wings from a position slightly to the left of, the intercepted aircraft and, after acknowledgement, a slow level turn, normally to the left, on to the desired heading.	You have been intercepted. Follow me.	AEROPLANES DAY-Rocking wings and following	Understood ,will comply.
2	NIGHT - Same and, in addition, flashing navigational lights at irregular intervals.		NIGHT-Same and in addition flashing navigational lights at irregula intervals.	
3	Note 1: Meteorological conditions or terrain may require the intercepting aircraft to take up a position slightly above and ahead of, and to the right of, the intercepted aircraft and to make the subsequent turn to the right.		HELICOPTERS: DAY or NIGHT- Rocking aircraft, flashing navigationa lights at irregular intervals and following	
4	Note 2:If the intercepted aircraft is notable to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock its wings each time it passes the intercepted aircraft.			
5	DAY OR NIGHT-An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line flight of intercepted aircraft.	Yes may proceed	AIRPLANES: DAY or NIGHT- Rocking wings. HELICOPTERS: DAY or NIGHT-Rocking aircraft	Understood will comply
6	DAY-Circling aerodrome, lowering landing gear and overlying runway in direction of landing or, if the intercepted aircraft is a helicopter, overlying the helicopter, landing area. NIGHT-Same and, in addition, showing steady landing lights.	Land at this aerodrome	AIRPLANES: DAY- Lowering landing gear, following the intercepting aircraft and, if after overlying the runway landing is considered safe, proceeding to land. NIGHT- Same and, in addition, showing steady landing lights (if carried) HELICOPTERS: DAY or NIGHT-Following the intercepting aircraft and proceeding to land showing a steady landing light (if carried)	Understood will comply

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
7	AIRPLANES: DAY: Raising landing gear while passing over landing runway at a height exceeding 300m (1000FT) but not exceeding 600m (2000ft) above the aerodrome level, and continuing to circle the aerodrome. NIGHT-Flashing landing lights while passing over landing runway at a height exceeding 600m (2000ft) above the aerodrome level, and continuing to circle the aerodrome. If unable to Flash landing any other lights but in such a manner as to be distinct from flashing lights	Aerodrome you designated is in adequate	DAY or NIGHT-If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals for intercepting aircraft As prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
8	AIRPLANES: DAY or NIGHT-Regular switching on and off all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT- Use Series 2 signals prescribed for intercepting aircraft.	Understood.
9	AIRPLANES: DAY or NIGHT-Irregular flashing of all available lights	In distress.	DAY or NIGHT- Use Series 2 signals prescribed for intercepting aircraft.	Understood.

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ENR 1.13 UNLAWFUL INTERFERENCE

5 General

The following procedures are intended for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

6 Procedures

2.1 Unless considerations aboard the aircraft dictate otherwise, the pilot-in-command should attempt to continue flying on the assigned track and at the assigned cruising level at least until he is able to notify an ATS unit.

2.2 When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:

a) attempt to broadcast warnings on the VHF emergency frequency and other appropriate frequencies, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on-board transponders, data links, etc., should also be used when it is advantageous to do so and circumstances permit; and
b) proceed in accordance with applicable special procedures for in-flight contingencies, where such procedures have been established and promulgated in Doc. 7030-Regional Supplementary Procedures; or
c) if no applicable regional procedures have been established, proceed at a level which differs from cruising levels normally used for IFR flights in the area by 300m (1000 FT) if above FL 290 or by 150m (500 FT) if below FL 290.

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ENR 1.14 **Air traffic incidents**

1 Definition of air traffic incidents

1.1 Air traffic incident" is used to mean a serious occurrence related to the provision of air traffic services, such as:

a) aircraft proximity (AIRPROX);
b) serious difficulty resulting in a hazard to aircraft caused, for example, by:
- faulty procedures
- non-compliance with facilities;
- failure of ground facilities.

1.1.1 Definitions for aircraft proximity and AIRPROX.

Aircraft proximity. A situation in which, in the opinion of the pilot or the air traffic services personnel, the distance between aircraft, as well as their relative positions and speeds, has been such that the safety of the aircraft involved may have been compromised.

1.1.2 Aircraft proximity is classified as follows:

a) *Risk of collision*. The risk classification of aircraft proximity in which serious risk of collision has existed.
b) *Safety not assured*. The risk classification of aircraft proximity in which the safety of the aircraft may have been compromised.

AIRPROX. The code word used in an air traffic incident report to designate aircraft proximity.

1.2 Air traffic incidents are designated and identified in reports as follows:

Type	Designation
Air traffic incident	Incident
As a) above	Airprox (aircraft proximity)
As b) 1) and 2) above	Procedure
As b) 3) above	Facility

2 Use of the Air Traffic Incident Report Form (See figures ENR 1.14 Figure 1 to ENR 1.14 Figure 5)

The Air Traffic Incident Report Form is intended for use:

a) by a pilot for filing a report on an air traffic incident after arrival or for confirming a report made initially by radio during flight.

REMARK:

The form, if available on board, may also be of use in providing a pattern for making the initial report in flight;

b) by an ATS unit for recording an air traffic incident report received by radio, telephone or teleprinter.

REMARK: The form may be used as the format for the text of a message to be transmitted over the AFS network.

3 Reporting procedures (including in flight procedures)

3.1 The following are the procedures to be followed by a pilot who is or has been involved in an incident:

3.1.1 during flight, use the appropriate air/ground frequency for reporting an incident of major significance particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;

3.1.2 as promptly as possible after landing, submit a completed Air traffic incident report form.

a) for confirming a report of an incident made initially as in a) above, or for making the initial report on such an incident if it had not been possible to report it by radio;
b) for reporting an incident which did not require immediate notification at the time of occurrence.

3.2 **An initial report made by radio should contain the following information:**

a) aircraft identification;
b) type of incident, e.g. aircraft
c) proximity;
d) the incident; 1a) and b); 2.a), b), c); d), n); 3.a), b), c), i); 4.a), b);
e) miscellaneous: 1.e).

3.3 The confirmatory report on an incident of major significance initially reported by radio or the initial report on any other incident should be submitted to the Civil Aviation Authority or to the ATS Reporting Office of the aerodrome of first landing for submission to the Civil Aviation Authority. The pilot should complete the Air Traffic incident Report Form, supplementing the details of the initial reports as necessary.

4 Purpose of reporting and handling of the form

4.1 The purpose of the reporting of aircraft proximity incidents and their investigation is to promote the safety of aircraft. The degree of risk involved in an aircraft proximity incident should be determined in the incident investigation and classified as "risk of collision", "safety not assured", "no risk of collision" or "risk not determined".
4.2 The purpose of the form is to provide investigator authorities with as complete information on air traffic incident as possible and to enable them to report back, which the least possible delay to the pilot or operator concerned, the result of the investigation of the incident and, if appropriate, the remedial action taken.

AIR TRAFFIC INCIDENT/SERIOUS INCIDENT REPORT FORM

For use when submitting and receiving a report on air traffic incident/serious incident. In an initial report by radio, shaded items should be included.

A - AIRCRAFT IDENTIFICATION	**B - TYPE OF INCIDENT** AIRPROX / PROCEDURE / FACILITY*

C - THE INCIDENT

1. General
   - a) Date/time of incident_____UTC
   - b) Position_____

2. Own aircraft

4
   - a) Heading and route_____
   - b) True airspeed_____ measured/misurata in ( ) KT ( ) km/h
   - c) Level and altimeter setting_____
   - d) Aircraft climbing or descending
     - ( ) level flight ( ) climbing ( ) descending
   - e) Aircraft bank angle
     - ( ) wing levels ( ) slight bank ( ) moderate bank
     - ( ) steep bank ( ) inverted ( ) unknow
   - f) Aicraft direction of bank
     - ( ) left ( ) right ( ) unknow
   - g) Restrictions to visibility
     - ( ) sunglare ( ) windscreen spillar ( ) dirty windscreen
     - ( ) other cockpit structure ( ) none
   - h) Use of aircraft lighting (select as many as required)
     - ( ) navigation lights ( ) strobe lights ( ) cabin lights
     - ( ) no
   - i) Traffic information issued
     - ( ) yes, based on radar ( ) yes, based on visual sighting ( ) no
     - ( ) no
   - j) Airborne collision avoiding system - ACAS
     - ( ) not carried ( ) Type ( ) traffic advisory issued
     - ( ) resolution advisory issued ( ) traffic advisory or resolution advisory not issued
   - k) Radar identification
     - ( ) no radar available ( ) radar identification ( ) no radar identification
   - l) Other aircraft sighted
     - ( ) yes ( ) no ( ) wrong aircraft sighted
   - m) Avoiding action taken
     - ( ) yes ( ) no
   - n) Type of flight plan IFR/VFR/none*

3. Other aircraft
   - a) Type and call sign/registration (if known) _____
   - b) If a) above not known, describe below/
     - ( ) high wing ( ) mid wing ( ) low wing
     - ( ) rotorcraft
     - ( ) 1 engine ( ) 2 enginesi ( ) 3 engines
     - ( ) 4 engines ( ) More than 4 engines

Marking colour or other available details

_____

_____

_____

c) Aircraft climbing or descending

( ) level flight ( ) climbing/ ( ) descending

( ) unknow

d) Aircraft bank angle

( ) wing levels ( ) slight bank ( ) moderate bank

( ) steep bank ( ) inverted ( ) unknow

e) Aicraft direction of bank

( ) left ( ) right ( ) unknow

f) Lights displayed

( ) navigation lights ( ) strobe lights ( ) cabin lights

( ) red anti-collision lights ( ) landing/taxi lights ( ) logo lights (tail fin)

( ) other ( ) none ( ) unknown

g) Traffic avoidance advice issued by ATS

( ) yes, based on radar ( ) yes, based on visual sighting ( ) Yes, based on other information

h) Traffic information issued

( ) yes, based on radar ( ) yes, based on visual sighting ( ) yes, based on other information

( ) no ( ) unknown

i) Avoiding action

( ) yes ( ) no ( ) unknown

4. Distance/distanza

a) Closest horizontal distance_____

b) Closest vertical distance_____

5. Flight weather conditions

a) IMC/VMC*

b) Above/below* clouds/fog/haze or between layers *

c) Vertical distance from cloud/_____mt/ft* below_____mt/ft above*

d) In cloud/rain/snow/sleet/fog/haze *

e) Flying into/out of sun *

f) Flight visibility/_____m/km*

6. Any other information considered important by the pilot in command/Ogni altra informazione ritenuta importante dal comandante

_____

_____

_____

_____

_____

_____

D MISCELLANEOUS

1. Information regarding reporting aircraft

a) Aircraft registration

b) Aircraft type_____

c) Operator_____

d) Aerodrome of departure_____

e) Aerodrome of first landing_____ destination_____

f) Reported by radio or other means to _____(name of ATS unit)at time_____UTC

g) Date/time/place of completion of form_____

2. Function, address and signature of person submitting report / Incarico, indirizzo e firma della persona che presenta il rapporto

a) Function_____

b) Address_____

c) Signature_____

d) Telephone number_____

E. SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED / INFORMAZIONI SUPPLEMENTARI DELL'ENTE ATS

1. Receipt of report/Ricezione del rapporto

a) Report received via AFTN / radio / telephone / other (specify)*_____

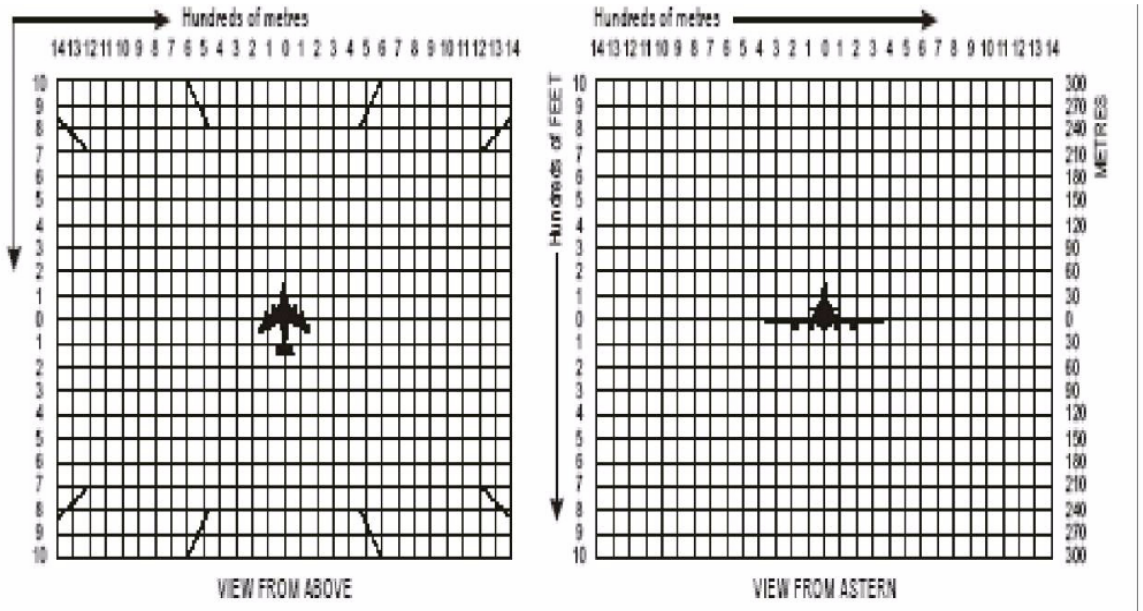
b) Report received by_____ (name of ATS unit)

2. Details of ATS action

Clearance, incident seen (radar/visually, warning given, result of local enquiry, etc.)

DIAGRAM OF AIRPROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the centre of each diagram. Include first sighting and passing distance.



VISTA DALL'ALTO **VISTA POSTERIORE**

Instructions for the completion of the Air Traffic Incident Report Form

Item

A Aircraft identification of the aircraft filing the report.

B An AIRPROX report should be filed immediately by radio

C1 Date/Time UTC and position in bearing and distance from a navigation aid or in LAT/LONG

C2 Information regarding aircraft filing the report, tick as necessary.

C2 c) E.g. FL350/1013 hpa or 2500 ft/QNH 1007 hpa or 1200 ft/QFE 998 hpa.

C3 Information regarding the other aircraft involved.

C4 Passing distance-state units used.

C6 Attach additional papers as required. The diagrams may be used to show aircraft's positions.

D1 f) State name of ATS unit and date/time in UTC.

D1 g) Date and Time in UTC

E2 Include details of ATS unit such as service provided, radiotelephony frequency, SSR Codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.

ENR 2 **Air Traffic Services Airspace**

ENR 2.1 FIR, UIR, TMA

Name Lateral limits Upper limit / Lower limit Class of airspace	Unit providing service	Call sign Languages Area and conditions of use Hours of operating	Frequency/Purpose	Remarks
1	2	3	4	5
Luanda FIR/UIR				
Luanda FIR/UIR includes, at present, all the airspace above an area bounded by lines joining successively the following point: from 17°00'00"S - 011°45'00"E to, 18°00'00"S - 010°00'00"E to, 18°00'00"S - 005°00'00"W to, 20°00'00"S - 010°00'00"W to, 12°00'00"S - 010°00'00"W to, 05°52'00"S - 006°35'00"E to, 04°10'00"S - 006°35'00"E to, 05°30'00"S - 008°51'00"E to, 05°10'00"S - 011°59'00"E on the West coast line along the border of Cabinda Province and northern border of Angola to 05°50'00"S - 016°00'00"E 07°20'00"S - 022°00'00"E to, 09°00'00"S - 022°00'00"E to, 11°00'00"S - 024°19'00"E to, 13°00'00"S - 023°00'00"E to, 13°00'00"S - 022°00'00"E to, 15°59'00"S - 022°00'00"E to, 17°23'00"S - 023°26'00"E to, 17°45'00"S - 021°21'00"E along the East and Southern border of Angola to the coast to 17°07'33"S - 018°23'11"E to, 17°07'33"S - 014°11'28"E FL 245 MSL/GND G UNL FL 245 G	ACC/FIC LUANDA	LUANDA Information EN / PT H24	2878KHZ 5493KHZ 6586KHZ 8888KHZ 8903KHZ 13294KHZ	FIR: Excluding the airspace classified "A" within these limits UIR: Excluding the airspace classified "A" within these limits
LUANDA TERMINAL CONTROL AREA/TMA				
Circle of radius 120 NM centred on: VNA VOR/DME 08°50'42"S 013°14'51"E FL 165 950M E UNL FL 165 A	TWR LUANDA	Luanda Tower EN / PT H24	118.1MHZ	
CABINDA CTR				
Circle of radius 15 NM centred on: CA NDB 05°35'00"S 012°11'07"E intercepted on South by a horizontal plan lying on ANGOLA/Democratic Republic of Congo border to the West coast line of Angola to 05°51'00"S 12°16'00"E 3000 Ft MSL/GND C	Cabinda Tower	Cabinda TWR EN / PT HJ	118.3MHZ	
LUANDA CTR				
Circle of radius 15 NM centred on: VNA VOR/DME 08°50'43"S 013°14'51"E 3000 Ft MSL/GND C	TWR LUANDA	Luanda Tower EN / PT H24	118.1	

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ENR 2.2 OTHER REGULATED AIRSPACE

1 Atlantic Ocean Random Routing Rnav Area - AORRA

1.1 The Atlantic Ocean Random Routing RNAV Area (AORRA), corresponding to oceanic sectors of Angola, Argentina, Brazil, South Africa and Uruguay between FL 290 and FL 410.

1.2 The users will benefit by being able to utilize the most convenient flight trajectory. Compliance with RNP 10 will ensure the navigation precision required for operations in the area of RNAV operations.

2 AORRA AIRSPACE

2.1 Description Of AORRA Airspace

As of 0001 UTC on AIRAC date 25 September 2007, the airspace between FL 290 and FL 410 inclusive will be designated as AORRA within Luanda Oceanic FIR.

2.1.1 Lateral limits of AORRA

A line joining the following coordinates within the Luanda Oceanic, Atlântico, Comodoro, Rivadavia Ezeiza, Johannesburg Oceanic and Montevideo FIRs defined as follows:

60°00’00’’S 015°00’00’’E
27°30’00’’S 015°00’00’’E
17°30’00’’S 011°13’00’’E
09°40’00’’S 011°24’00’’E

Then the portion of an arc 120Nm centered on Luanda VOR/DME to position S07 48 00 E011 30 00

Then a straight line to position

05°20’00’’S 010°00’00’’E
05°30’00’’S 008°50’00’’E
04°10’00’’S 006°35’00’’E
05°52’00’’S 006°35’00’’E
12°00’00’’S 010°00’00’’W
19°43’00’’S 034°55’00’’W
26°45’00’’S 043°45’00’’W
34°00’00’’S 050°00’00’’W
34°00’00’’S 051°33’20’’W
36°45’30’’S 053°11’47’’W
58°21’06’’S 053°00’00’’W
60°00’00’’S 053°00’00’’W

2.1.2 Flights operating within the AORRA in Luanda FIR shall enter and exit AORRA via the following gates:

URAPI	09°49’07’’S 003°48’00’’W
OSUKU	09°01’01’’S 001°36’04’’W
GAPEL	08°17’37’’S 000°19’00’’E
TERBA	04°50’07’’S 006°34’57’’E
OPAPO	07°48’07’’S 011°29’57’’E
ONTAR	09°37’44’’S 011°23’07’’E

2.2 Communications

HF communication.

2.3 Required navigation performance (RNP 10) procedures for aircraft operations within the AORRA.

2.3.1 Only those aircraft certified for RNP 10 operations shall operate within the AORRA.

2.3.2 No aircraft shall fill a flight plan to operate in the AORRA airspace unless it is RNP 10 certified to operate in this airspace by the state, as the case may be, except in the following circumstances:

2.3.3 The aircraft is being initially delivered to the State of Registry or the State of the operator;

2.3.4 The aircraft is certified but experienced navigation degradation and is being flown back to base or to a maintenance facility for repairs;

2.3.5 The aircraft is engaged on a humanitarian or mercy flight; 4.2.4 State aircraft.

2.4 Approval Of Airworthiness / Operations

2.4.1 RNP 10 Approval – The operators operating or intending to operate in AORRA airspace shall obtain RNP approval from the States of registry or States of operator as appropriate and which user complies with the following conditions:

The aircraft satisfies specifications of "Minimum Aircraft System Performance Specifications" (MASPS) of the State of registry.

The aircraft is operated under the conditions indicated in the RNP 10 operational approval issued by the user's State.

2.5 Flights Plans

2.5.1 When it is intended to operate an aircraft in AORRA airspace, RNP 10 compliance shall be indicated placing a "R" in box 10 of the flight plan form.

2.5.2 Flight plan shall contain entry and exit point to AORRA and the estimated time for every 5° of longitude.

2.5.3 In the case of repetitive flight plans RNP 10 compliance shall be indicated placing "R" in box Q of the RPL, regardless of the required level, as follows: EQPT/R.

2.6 Operational procedures before entering to AORRA Airspace

2.6.1 Before entering to AORRA airspace the RNP certified aircraft pilot-in-command shall verify that the required equipment to fly within AORRA airspace is normally operating and verify with the greatest possible accuracy the position of the aircraft through external air navigation aids.

2.6.2 If any equipment is not operating normally, the pilot should notify the ATC before entering the AORRA airspace.

2.6.3 Whilst operating within the defined area of the AORRA, flight levels will comply with the table of cruising levels as reflected in ENR 1.7-3 or Annex 2 Appendix 3(b). No RVSM operations are envisaged within AORRA until further notice.

2.6.4 RVSM transition procedures should be taken into consideration from/to RVSM airspace in the FIRS where RVSM transition areas are defined.

2.7 Operational procedures after entering the AORRA Airspace

2.7.1 General Procedures

If an aircraft cannot continue the flight in compliance with the ATC clearance issued and / or cannot maintain the precision required for the specified navigation performance in the airspace, ATC will be advised immediately.

2.7.2 Position reporting shall be at
Entry/Exit gate:

005°00’00’’E
010°00’00’’E
015°00’00’’E
000°00’00’’E/W
005°00’00’’W
010°00’00’’W
015°00’00’’W
020°00’00’’W
025°00’00’’W
030°00’00’’W
035°00’00’’W
040°00’00’’W
045°00’00’’W
050°00’00’’W

As well as any other position required by ATC.

2.7.3 Within Luanda FIR new Entry/Exit/FIR boundaries waypoints were established:

- New AORRA Entry/Exit/Wpts

5NLC	Latitude	Longitude
EKBOB	S 05 00 00.00	E 008 00 00.00
NERUP	S 05 28 34.79	E 009 00 00.00
TIMAK	S 05 20 00.00	E 010 00 00.00
TETUX	S 06 00 00.00	E 010 25 00.00
NIDUS	S 07 00 00.00	E 011 00 00.00

ENR 3.1 LOWER ATS ROUTES

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels Odd	Direction of Cruising levels Even	Remarks Controlling
1	2	3	4	5	6	7		8
A400F ▲ ARAKI S 05 18 07 E 010 43 57				G		↓		BRAZZAVILE FIR LUANDA FIR
▲ NATAR S 07 12 28 E 012 04 45	145º 324º	139		G BELOW FL165 A ABOVE FL165				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ KODOR S 07 45 14 E 012 28 03	145º 324º	40	FL 245 FL090	E BELOW FL145 A ABOVE FL145				
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	114º 294º	80	5500Ft					CTC LUANDA ACC 118.5 MHZ
▲KIMBU 09°23'52"S 014°28'32"E	114º 294º	80		E BELOW FL145 A ABOVE FL145				
▲ VOTAL S 09 40 24 E 0115 05 26	114º 294º	40		G BELOW FL165 A ABOVE FL165				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ LUENA VOR/DME (VUE) S 11 45 57 E 019 53 51	114º 294º	310		G BELOW FL165 A ABOVE FL165				
▲ EGSUD S 13 06 36 E 022 00 00	123º 303º	148		G BELOW FL165 A ABOVE FL165		↑		LUANDA FIR LUSAKA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
A406F ▲ SHIMA S06°31'46" E018°44'42"	122 302	229	FL 245 FL 50 4500FT	A		↓		KINSHASA FIR LUANDA FIR
▲ PORAT S07°30'18" E020°17'29"	304º 125º	120						LUANDA FIR
▲ SENAL S08°34'18" E 022°00'00"							↑	KINSHASA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels Odd	Direction of Cruising levels Even	Remarks Controlling
1	2	3	4	5	6	7		8
A611F ▲ BUDEL 05°53'02"S 014°41'59"E						↓		KINSHASA UIR LUANDA UIR
	206 026	77		G				
▲ DISPO 07°02'28"S 014°08'06"E			FL 245 FL060					
	207 027			G BELOW FL165				
▲ ILDIN 07°38'33"S 013°50'24"E		40	5500Ft					CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
	206 026			A ABOVE FL165				
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51		80						
				E BELOW FL145 A ABOVE FL145				CTC LUANDA ACC 118.5 MHZ
▲ BIRUT 09°22'07"S 012°00'25"E	235 055	80						
▲ ONTAR 09°37'44"S 011°23'07"E	254 074	40		G				
▲ BOSNI 10°59'56"S 008°02'46"E	246 067	214		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ ITPIK 12°12'16"S 005°00'00"E	249 069	195		G				
	252 072	40		G		↑		

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
▲ AVIGI 12°27'45"S 004°20'22"E						↓		CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ EGNOS 14°05'19"S 000°00'03"E	248 069	274	FL 245 FL 50					
▲ APRAS 15°50'26"S 005°00'00"W	250º 071º	308						
▲ ILGER 17°27'03"S 010°00'00"W	251º 072º	303		G		↑		LUANDA FIR RIO DE JANEIRO FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
B733F ▲ ANUBI 06°00'07"S 016°19'57"E	148 328	110	FL 245 FL070	G	20	↓		KINSHASA FIR LUANDA FIR
▲ UVAGO 07°33'58"S 017°19'07"E		33						CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ LUBRA 08°01'57"S 017°36'05"E	148 328	111		G				
▲ KILBI 09°37'13"S 018°34'14"E	148 328	150		G				
▲ LUENA VOR/DME (VUE) 11°45'57"S 019°53'51"E	150 329	393		G				
▲ BUGRO 17°50'04"S 022°29'58"E	157 337			G		↑		LUANDA FIR GABERONEFIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
G652F ▲ EDLIN 06°04'50"S 016°59'31"E	137º 316º	144	FL 245 FL070 6500 Ft.	G	40	↓		KINSHASA FIR LUANDA FIR
▲ KOSOK 06°31'51"S 017°25'03"E	137º 317º	107		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ RIVOM 07°49'45"S 018°38'59"E	136º 316º	154		G				
▲ SAURIMO VOR/DME (VSA) 09°41'17"S 020°26'03"E	119º 298º	237		G				
▲ UDNOR 11°33'55"S 023°56'57"E						↑		LUANDA FIR LUSAKA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels Odd	Direction of Cruising levels Even	Remarks Controlling
1	2	3	4	5	6	7		8
G853F ▲ TERBA 04°47'54"S 006°35'00"E						↓		ACCRA FIR LUANDA FIR
▲ OPAPO 07°48'07"S 011°29'57"E	121 301	343		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ SIPLA 08°08'53"S 012°05'27"E	120 300	40	FL 245 FL060	G BELOW FL145 A ABOVE FL145				
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	121 301	80	5500Ft	E BELOW FL145 A ABOVE FL145				CTC LUANDA ACC 118.5 MHZ
▲ MEMAS 09°47'11"S 014°12'27"E	134 314	80						
▲ TUTIM 10°15'21"S 014°41'22"E	135 315	40		G				
▲ KUITO NDB (KU) 12°24'39"S 016°55'52"E	135 315	185		G				
▲ CUITO CUANAVALE NDB (CV) 15°10'00"S 019°09'00"E	142 321	209		G				
▲ AGRAM 18°00'04"S 021°39'58"E	140 319	223		G		↑		LUANDA FIR GABERONE FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
H600F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	103º 283º	80	FL 165 FL080 6600 Ft.	E BELOW FL145 A ABOVE FL145	20	↓		LUANDA ACC 118.5 MHZ ABOVE FL165 LUANDA APP 119.1 MHZ
▲ AVOVA 09°08'11"S 014°33'46"E	102º 282º	40		E BELOW FL145 A ABOVE FL145				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ DEPAN 09°16'49"S 015°13'16"E	102º 282º	70		G				
▲ MALANGE NDB (MA) 09°31'38"S 016°22'00"E	093º 272º	131		G				
▲ KILBI 09º37'13"S 018º 34'14"E	091º 271º	108		G				
▲ SAURIMO VOR/DME (VSA) 09°41'17"S 020°26'03"E						↑		

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
H613F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	089º 269º	80	FL 245 FL100	E BELOW FL145 A ABOVE FL145		↓		LUANDA ACC 118.5 MHZ ABOVE FL165 LUANDA APP 119.1 MHZ
▲ IMRAS 08°49'45"S 014°35'40"E		40						
▲ NETOK 08°49'09"S 015°16'04"E	089º 269º	162						CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ CAFUNFO NDB (CF) 08°46'00"S 018°00'00"E	089º 269º	70		G BELOW FL165				
▲ OKDAT 08°15'24"S 019°03'29"E	064º 244º	91		A ABOVE FL145				
▲ NEVIT 07°35'00"S 020°26'00"E	064º 244º							
▲ DUNDO 07°24'00"S 020°49'00"E	064º 244º	25				↑		LUANDA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
J614F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	178º 358º	80	FL 165 FL080 6600 Ft.	E BELOW FL145 A ABOVE FL145		↓		LUANDA ACC 118.5 MHZ ABOVE FL165 LUANDA APP 119.1 MHZ
▲ EXALA 10°11'01"S 013°18'12"E	178º 358º	40		G BELOW FL145 A ABOVE FL145				
▲ LIRAM 10°51'10"S 013°19'53"E	177º 357º	76		G				
▲ BENGUELA 12°36'29"S 013°24'19"E	175º 355º	139		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ LUBANGO 14°55'26"S 013°35'52"E	163º 343º	156		G				
▲ RUACANA 17°25'05"S 014°22'23"E							↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
R526F ▲ LIKAD 05°04'18"S 011°40'43"E			FL 245 FL 40 3500FT	G	20	↓		BRAZZAVILLE FIR LUANDA FIR CTC LUANDA INFORMATION MWARA 8903KHZ,5493KHZ, 13294KHZ,8960, 8888KHZ,5565KHZ, 8861KHZ,2878KHZ, 655 9KHZ
▲ EXITO 06°59'22"S 012°28'27"E	158º 338º	121 40						
▲ EPLAT 07°36'30"S 012°43'53"E	157º 357º	80		C BELOW FL165 A ABOVE FL165				
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	157º 357º			E BELOW FL145 A ABOVE FL145		↑		LUANDA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
R987F ▲ CABINDA VOR/DME (VCA) 05°38'04"S 012°11'22"	160º 340º	32	FL 245 FL060 5500Ft.	G	20	↓		LUANDA FIR CABINDA LUANDA ONLY DOMESTIC FLIGHTS
▲ SOYO NDB (SO) 06°08'22"S 012°22'20"E	162º 342º	50		G BELOW FL165				
▲ AVUTA 06°55'59"S 012°37'40"E	162º 342º	40		A ABOVE FL165				
▲ IMLEX 07°34'14"S 012°50'02"E	162º 342º	80						LUANDA APP 119.1 MHZ
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	164º 344º	80						CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ ARGOL 10°07'54"S 013°37'27"E	164º 344º	40		G BELOW FL165 A ABOVE FL165				
▲ UVAMO 10°46'28"S 013°48'49"E	164º 344º	120		G				
▲ ILGOL 12°42'09"S 014°23'13"E	164º 344º	289		G		↑		LUANDA FIR WINDHOEK UIR
▲ ANVAG 17°21'04"S 015°45'33"E								

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
W874F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 5			FL 245 FL 90	E BELOW FL145 A ABOVE FL145		↓		CTC LUANDA ACC 118.5 MHZ ABOVE FL165
▲ UDANO 10°10'01"S 013°01'42"E	189º 009º	80	7500FT					
▲ ETBON 10°49'40"S 012°55'05"E	189º 009º	40		G BELOW FL165 A ABOVE FL165				CTC LUANDA INFORMATION MWARA 8903KHZ,5493KHZ, 13294KHZ,8960, 8888KHZ,5565KHZ, 8861KHZ,2878KHZ, 655 9KHZ
▲ OKTAG 12°29'03"S 012°38'22"E	189º 009º	102		G				
▲ NAMIBE VOR/DME (VMO) 15°15'13"S 012°09'54"E	189º 010º	166		G				
▲ RUACANA 17°25'05"S 014°22'23"E	136º 315º	182		G		↑		LUANDA FIR

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ENR 3.2 UPPER ATS ROUTES

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UA400F ▲ ARAKI S 05 18 07 E 010 43 57	145º 324º	260 138				↓		LUANDA FIR BRAZZAVILE FIR
▲ NATAR S 07 12 28 E 012 04 45	145º 324º	40						LUANDA FIR
▲ KODOR S 07 45 14 E 012 28 03	114º 294º	80	UNL FL 245					CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	118º 298º	120	9000Ft	A				
▲ VOTAL S 09 40 24 E 0115 05 26	114º 293º	61						CTC LUANDA ACC 118.5 MHZ
▲ APRIG (X UA 617F) S 10 05 30 E 016 02 00	114º 293º	249						
▲ LUENA VOR/DME (VUE) S 11 45 57 E 019 53 51	123º 302º	148						
▲ EGSUD S 13 06 36 E 022 00 00						↑		LUANDA FIR LUSAKA FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
A406F ▲ SHIMA S06°31'46" E018°44'42"						↓		KINSHASA FIR ACCLUANDA FIR
▲ PORAT S07°30'18" E020°17'29"	122º 302º	229	FL 245 FL 50	A				LUANDA FIR ACC KINSHASA FIR
▲ SENAL S08°34'18" E 022°00'00"	304º 125º	120					↑	

ROUTE UA617 (AKAZU- ITNEL)

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UA617 ▲ AKAZU (FIR BDRY) S 17 23 30 E 016 51 08	003º 183º	133				↓		Luanda FIR/ Windhoek FIR
▲ EXIRO (X UT372) S 15 11 01 E 016 35 51			RNAV10					Luanda FIR
▲ NETIL (X UV858) S 13 25 34 E 016 24 12	001º 181º	106		A				
▲ TIBAD (X UG853) S 11 43 35 E 016 12 49	360º 180º	102	UNL FL 245			↑		CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ APRIG (X UA 400) S 10 05 30 E 016 02 00	359º 179º	98				↓		
▲ IMTOP (X UH600) S 09 26 26 E 015 57 43	359º 179º	39						
	359º 179º	38				↑		

ROUTE UA617 (AKAZU- ITNEL)

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UA617 ▲ ESVAS (X UH613) S 08 48 32 E 015 53 35	358º 178º	27				↓		Luanda FIR
▲ ERDAB (X UH612) S 08 22 00 E 015 50 42	358º 178º	19	RNA V10					CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ APNET (X UG450) S 08 02 45 E 015 48 36				A				
▲ ANTUX (X UM216) S 07 39 17 E 015 46 03	358º 178º	24	UNL FL 245					
▲ ITNEL (FIR BDRY) S 05 50 06 E 015 34 17	357º 177º	109				↑		Luanda FIR Kinshasa FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UB733F ▲ ANUBI S 06 00 07 E 016 19 57	148º 328º	75	FL 285 FL 245	G		↓		KINSHASA UIR LUANDA UIR
▲ UNDOP 07 04 07 S 016 59 11 E	148º 328º	35						CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ UVAGO 07 33 58 S 017 19 07 E	148º 328º	33						
▲ LUBRA 08 01 57 S 017 36 05 E	148º 328º	111						
▲ KILBI 09 37 13 S 018 34 14 E	150º 329º	150						
▲ LUENA VOR/DME (VUE) 11 45 57 S 019 53 51 E	157º 337º	393						
▲ BUGRO 17 50 04 S 022 29 58 E						↑		LUANDA UIR GABERONE UIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UG450F ▲ LUANDA VOR/DME (VNA) 08°50'43"S 013°14'51"E								
	072º 252º	80	UNL FL 245	G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ UNDOS 08°26'48"S 014°31'58"E								
	073º 252º	40		G				
▲ IBKOK 08°14'45"S 015°10'28"E								
	073º 252º	103		G				
▲ UVAGO 07°33'58"S 017°19'07"E								
	073º 253º	51		G				
▲ APKOK 07°18'00"S 018°08'47"E								
	071º 251º	26		G				
▲ INUGA 07°10'45"S 018°31'15"E								Luanda FIR Kinshasa FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UG652F ▲ KOSOK 06°31'51"S 017°25'03"E	137º 316º	107	FL 245 FL070 6500 Ft.	G	40	↓		KINSHASA UIR LUANDA UIR
▲ RIVOM 07°49'45"S 018°38'59"E				G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ SAURIMO VOR/DME (VSA) 09°41'17"S 020°26'03"E	136º 316º	154		G				
▲ UDNOR 11°33'55"S 023°56'57"E	119º 298º	237		G			↑	LUANDA FIR LUSAKA UIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UG853F ▲ TERBA S 04 47 54 E 006 35 00						↓		KINSHASA UIR LUANDA UIR
	121º 301º	343	UNL FL 245	G				
▲ OPAPO 07 48 07S 011 29 57E								
▲ LUANDA VOR/DME (VNA) 08 50 43S 013 14 51E	120º 300º	120		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ TUTIM 10 15 21 S 014 41 22 E	134º 314º	120		G				
▲ TIBAD (X UA617) 11 43 35 S 016 12 49 E	135º 314º	126						
▲ KUITO NDB (KU) 12 24 39 S 016 55 52 E	135º 314º	59		G				
▲ CUITO CUANAVALE NDB (CV) 15 10 00 S 019 09 00 E	142º 321º	210		G				
▲ AGRAM 18 00 04 S 021 39 58 E	140º 319º	223		G		↑		LUANDA UIR GABERONE UIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UH600F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51						↓		LUANDA ACC 118.5 MHZ
▲ AVOVA 09°08'11"S 014°33'46"E	103º 283º	80	UNL FL245 6500 Ft.	A				
▲ DEPAN 09°16'49"S 015°13'16"E	102º 282º	40		A				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ MALANGE NDB (MA) 09°31'38"S 016°22'00"E	102º 282º	70		G				
▲ KILBI 09º37'13"S 018º 34'14"E	093º 272º	131		G				
▲ SAURIMO VOR/DME (VSA) 09°41'17"S 020°26'03"E	091º 271º	108		G		↑		

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UH612F ▲ LUANDA VOR/DME (VNA) 08 50 43S 013 14 51E	080º 259º	80	UNL FL 245	A	20			LUANDA ACC 118.5 MHZ
▲ ESTOX 08°36'13"S 014°34'19"E	079º 259º	40		A				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ GEBDO 08°28'51"S 015°14'00"E	079º 259º	143		G				
▲ LUBRA 08°01'57"S 017°36'05"E	079º 259º	64		G				
▲ RIVOM 07°49'45"S 018°38'59"E	079º 259º	132		G				
▲ OKSOR 07°40'18"S 019°27'12"E								

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UJ614F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51	178º 358º	80	UNL FL245 10000 Ft.	A	20	↓		LUANDA ACC 118.5 MHZ
▲ EXALA 10°11'01"S 013°18'12"E	178º 358º	40		A				
▲ LIRAM 10°51'10"S 013°19'53"E	177º 357º	76		G				
▲ BENGUELA 12°36'29"S 013°24'19"E	175º 355º	139		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ LUBANGO 14°55'26"S 013°35'52"E	163º 343º	156		G				
▲ RUACANA 17°25'05"S 014°22'23"E							↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UR526F ▲ LIKAD 05°04'18"S 011°40'43"E	158º 337º	121	UNL FL245 3500FT	G	20	↓		BRAZZAVILLE UIR LUANDA UIR CTC LUANDA INFORMATION MWARA 8903KHZ,5493KHZ, 13294KHZ,8960, 8888KHZ,5565KHZ, 8861KHZ,2878KHZ, 655 9KHZ
▲ EXITO 06°59'22"S 012°28'27"E	157º 357º	40		A				
▲ EPLAT 07°36'30"S 012°43'53"E	157º 357º	80		A				
▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51						↑		CTC LUANDA ACC 118.5 MHZ

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UR991F						↓		
▲ GAPEL 08°17'37"S 000°19'00"E	136º 315º	140	UNL FL245	G	20			LUANDA ACC 118.5 MHZ
▲ APNUK 09°58'14"S 001°54'59"E	135º 315º	207		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ AVIGI 12°27'45"S 004°20'22"E	135º 314º	217		G				
▲ UDMON 15°03'32"S 006°56'18"E	053º 232º	649		G				
▲ ILDIR 18°00'00"S 010°00'00"E						↑		

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UV858F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51			UNL FL245	A	20	↓		CTC LUANDA ACC 118.5 MHZ
	148º 328º	80						
▲ DETKU 09°58'52"S 013°57'46"E								
	148º 328º	40		A				
▲ ENBED 10°33'00"S 014°19'09"E								CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
	149º 329º	128		G				
▲ HUAMBO VOR/DME (VHU) 12°48'31"S 015°44'58"E								
	134º 313º	162		G				
▲ MENONGUE NDB (ME) 14°40'00"S 017°44'00"E								
	110º 290º	88		G				
▲ CUITO CUANAVALE NDB (CV) 15 10 00 S 019 09 00 E							↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UW874F ▲ LUANDA VOR/DME (VNA) S 08 50 43 E 013 14 51			UNL FL245			↓		CTC LUANDA ACC 118.5 MHZ
	189º 009º	80		A	20			
▲ UDANO 09°58'52"S 013°57'46"E								
	189º 009º	40		A				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ ETBON 10°33'00"S 014°19'09"E								
	189º 009º	128		G				
▲ OKTAG 12°48'31"S 015°44'58"E								
	189º 010º	162		G				
▲ NAMIBE VOR/DME (VMO) 14°40'00"S 017°44'00"E								
	136º 315º	88		G				
▲ RUACANA ENDB (RC) 17°25'05"S 014°22'23"						↑		LUANDA FIR WINDHOEK FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UB 528F ▲ LUENA VOR/DME (VUE) 11 45 57 S 019 53 51 E	137º 317º	184	UNL FL245	G	20	↓		CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ APDAR 14º02'00'' S 022º00'00'' E							↑	Luanda FIR Lusaka FIR

ENR 3.3 AREA NAVIGATION (RNAV) ROUTES

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UM 731 **▲DURNA** S07°52'09" E019°51'23"						↓		Luanda FIR Kinshasa FIR
▲SAURIMO VOR/DME (VSA) S09º41'17'' E020º26'03''	163º 342º	114	UNL FL245	A	RNP 10			CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
△ **EXIGO** S 12º57'22'' E 021º45'32''	158º 338º	210						
▲EPNUL S 13º35'38'' E 022º00'10''	159º 339º	41				↑		Luanda FIR Lusaka FIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UR998						↓		KINSHASA UIR LUANDA UIR
▲ INUGA 07°10'45"S 018°31'15"E	164º 343º	73	UNL FL245	G	RNP 10			
▲ EPLAV 08°20'49"S 018°52'16"E	163º 343º	81		G				CTC LUANDA INFORMATION 8903Khz, 5493Khz, 13294Khz, 8960Khz, 8888Khz, 5565Khz, 8861Khz, 2878Khz, 6559Khz
▲ AXUGO 09°38'40"S 019°15'38"E	092º 272º	70		G				
▲ LUENA VOR/DME (VUE) 11°45'57"S 019°53'51"E	166º 346º	501		G				
▲ BUGRO 17°50'04"S 022°29'58"E						↑		LUANDA UIR LUSAKA UIR

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT371 ▲ LUANDA VOR/DME (VNA) 08 50 43 S 013 14 51 E	277º 096º	120	RNAV10 UNL FL 245	A		↓	↑	Luanda FIR
▲ UTSAG (AORRA GATE) 08 49 33 S 011 13 39 E								

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT399 ▲ **LUANDA VOR/DME (VNA)** S08 50 43 E013 14 52			RNAV10			↓		Luanda FIR
▲ **ANSUS (TMA)** S10 31 00 E012 07 24	221º 041º	120	UNL FL 245	A				
▲ **DUGRA (AORRA GATE)** S 11 39 36 E 011 20 34	220º 041º	82					↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT372 ▲ **ABAPU (FIR BDRY)** S 17 49 38 E019 02 02						↓		Luanda FIR/ Windhoek FIR
▲ **EXIRO (XUA617)** S 15 11 01 E016 35 51	326º 145º	211	RNAV 10					Luanda FIR
▲ **ILGOL (XUN187)** S 12º42'09'' E014 23 13	326º 145º	197		A				
▲ **APKAT (XUJ614)** S 11 40 04 E013 21 55	322º 142º	86	UNL FL 245					
	322º 142º	42					↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT372 ▲ IBLUD (XUN190) S 11 09 29 E012 51 59	317º 137º	58	RNAV10	A		↓		Luanda FIR
▲ ANSUS (TMA) S10 31 00 E012 07 24	326º 146º	69	UNL FL 245					
▲ ONTAR (A0RRA GATE) S 09 37 44 E011 23 07							↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT373 ▲ ANVAG (FIR DRY) S 17 23 30 E015 49 22						↓		Luanda FIR/ Windhoek FIR
	328º 148º	196	RNAV10					
▲ LUBANGO NDB (UB) S 14 55 26 E 013 35 52								
	334º 153º	114		A				Luanda FIR
▲ APGAL (XUN190) S 13 20 25 E012 29 41			UNL FL 245					
	333º 153º	121						
▲ DUGRA (AORRA GATE) S 11 39 36 E 011 20 35							↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT374 ▲ LUBANGO NDB (UB) S 14 55 26 E 013 35 52	319º 139º	93	RNAV10	A		↓		Luanda FIR
▲ EVUKU (XUN190) S 13 54 36 E 012 23 42			UNL FL 245					
▲ EPMES (AORRA GATE) S 13 00 00 E 011 19 24	318º 139º	83					↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UT375 ▲ EVUVI (FIR BDRY) S 17 24 01 E 014 21 22	304º 125º	113	RNAV10	A		↓		Luanda FIR Windhoek FIR
▲ OKBIK (XUN190) S 16 35 48 E012 34 42			UNL FL 245					Luanda FIR
▲ ETLOV (AORRA GATE) S 16 00 00 E 011 15 24	304º 125º	84					↑	

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UN184 ▲ EVUVI (FIR BDRY) S 17 24 01 E 014 21 22			RNAV1 0			↓		Luanda FIR/Windhoek FIR
▲ NAMIBE VOR (VMO) S 15 15 12 8 E 012 09 54	324º 145º	182	UNL FL 245	A				Luanda FIR
▲ EGNAB (AORRA GATE) S 14 25 30 E011 17 24	323º 143º	71					↑	

SEGMENT ROUTE J614F

Route Designator Significant points coordinates	Track Mag (GED)	Dist (NM)	Upper Limits Lower Limits MNM FLT ALT	Airspace Classification	Lateral Limits NM	Direction of Cruising levels		Remarks Controlling
						Odd	Even	
1	2	3	4	5	6	7		8
UJ614F ▲ LUBANGO NDB (UB) S 14 55 26 E 013 35 51	172º 353º	155	RNAV1 0	A		↓		Luanda FIR
▲ EVUVI (FIR BDRY) S 17 24 01 E 014 21 22			UNL FL 245				↑	Luanda FIR/ Windhoek FIR

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ENR 3.4 HELICOPTER ROUTES

To be developed

Intentionally left blank

ENR 3.4 Helicopter routes

NIL

Intentionally left blank

ENR 3.4 EN-ROUTE HOLDING

NIL

Intentionally left blank

ENR 4.1 **RADIO NAVIGATION AIDS - EN-ROUTE**

Name of station	ID	Frequency (CH)	Hours of operation	Co-ordinates	Elevation DME antenna	Remarks
1	2	3	4	5	6	7
BENGUELA (BENGUELA/ 17 De Setembro) NDB	BG	372.0 KHZ	H24	12°36'29"S 013°24'19"E		100 NM
KUITO NDB	KU	320.0 KHZ	H24	12°24'39"S 016°55'52"E		
SAURIMO (SAURIMO/ Saurimo) NDB	SA	293.0 KHZ	HJ	09°39'44"S 020°23'59"E		200 NM
SOYO NDB	SO	310.0 KHZ	H24	06°08'22"S 012°22'20"E		75 NM
LUBANGO (LUBANGO/ Mukanka) NDB	UB	335.0 KHZ	HJ	14°55'26"S 013°35'52"E		
LUENA (LUENA/ Moxico) NDB	UE	375.0 KHZ	H24	11°45'44"S 019°53'57"E		150 NM
CABINDA (CABINDA/ Cabinda) VOR/DME	VCA	375.0 KHZ	H24	05°38'04"S 012°11'22"E		100 NM
HUAMBO (HUAMBO/ Albano Machado) VOR/DME	VHU	113.3 MHZ (CH 80X)	H24	12°48'31"S 015°44'58"E		100 NM
NAMIBE (NAMIBE/Yuri Gagarin) VOR/DME	VMO	114.1 MHZ (CH 88X)	H24	15°15'13"S 012°09'54"E		100 NM
LUANDA (LUANDA/4 De Fevereiro) VOR/DME	VNA	112.7 MHZ	H24	DME: VOR: 08°50'43"S 013°14'51"E		150 NM
LUANDA (LUANDA/4 De Fevereiro) VOR/DME	ILS/ LLZ	110.3 MHZ	H24	08°12'00"S 013°13'00"E		
LUANDA (LUANDA/4 De Fevereiro) VOR/DME	ILS/ GP	335.0 Mhz	H24			
LUANDA (LUANDA/4 De Fevereiro) VOR/DME	NDB	258 Khz	H24	08°47'00"S 013°18'00"E		

ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

Name of station	ID	Frequency (CH)	Hours of operation	Co-ordinates	**Elevation DME antenna**	Remarks
1	2	3	4	5	6	7
SAURIMO (SAURIMO/ Saurimo) VOR/DME	VSA	117.1 MHZ	H24	09°41'17"S 020°26'03"E		
LUENA (LUENA/ Moxico) VOR/DME	VUE	113.7 MHZ	H24	11°45'57"S 019°53'51"E		150 NM
CUITO CUANAVALE NDB	CV	387.0 KHZ	H24	15°10'00"S 019°09'00"E		100 NM

ENR 4.2 GLOBAL NAVIGATION SATELITE SYSTEMS

1. TRIAL RNAV Approach procedure/SID/STAR/Initial approach for RWY23 at Luanda, 4 de Fevereiro Airport (FNLU).

Trial RNAV procedures are introduced for RWY 23 at Luanda, 4 de Fevereiro International Airport (FNLU) Following Procedures will be introduced:

1) RNAV (GNSS) RWY23 Approach
2) RNAV (GNSS) STARs for RWY23
3) RNAV (GNSS) SIDs for RWY23
4) RNAV (GNSS) Initial Approach procedure for ILS RWY 23.

2. Requirements

2.1 Operator and Aircraft:

A. RNAV (GNSS) SID/STAR/ Initial Approach procedure.

Operators and aircrafts intending to fly RNAV (GNSS) SID/STAR/ initial approach procedures are required to be appropriately met to ICAO RNAV 1 requirement(ICAO DOC 9613 performance based navigation (PBN) manual), FAA AC90-100A US. Terminal and en-route area navigation (RNAV) operations or JAATGL10
Airworthiness and operational approval for precision RNAV operations in designated European Airspace.

B. RNAV (GNSS) approach

Operators and aircrafts intending to fly RNAV (GNSS) approach procedures are required to be appropriately met to ICAO RNP APCH requirement (ICAO, Doc 9613 performance based navigation (PBN manual), BaroVNAV requirement (PBN manual) in the case of using BaroVNAV.
FAA (AC20-138 and /AC20-129 or EASA (AMC20-5 or AMC20-27 are also applicable for RNAV (GNSS) approach requirement.

2.2 Point of contact

Aircraft Operators seeking participation in trial should contact following INAVIC
INSTITUTO NACIONAL DA AVIAÇÃO CIVIL
RUA MIGUEL DE MELO N•96/6• ANDAR
e-mail: inavic@inavic.gv.ao
e-mail: arquimedes.ferreira@inavic.gv.ao
Tel. +244 222 335996 Fax. -244 222 390529

2.3 Report
When crew has navigational error, report to ATC
After the flight, report details to INAVIC contact (CPY to ENANA contact)
2.4. Request of trial procedure
Crew on the aircraft participating to this trial should request the trial procedure to ATC when initial contact.

1. Flight Plan

3.1 ITEM 10: ‘‘R’’
3.2 ITEM 18 NAV/RNAV1

Name-code designator	Coordinates	ATS route or other route
1	2	3
ABAPU (FIR BDRY)	17°49'38"S 019°02'02"E	
AGRAM	18°00'04"S 021°39'58"E	G853F, G853F, UG853F, UG853F
AKAZU	17°22'35"S 016°51'20"E	UA617F
AKAZU (FIR BDRY)	17°23'30"S 016°51'08"E	
ANSUS (TMA)	10°31'00"S 012°07'24"E	
ANTUX	07°39'17"S 015°46'03"E	
ANUBI	06°00'07"S 016°19'57"E	B733F, UB733F
ANVAG	17°21'04"S 015°45'33"E	R987F, R987F
ANVAG (FIR BDRY)	17°23'30"S 015°49'22"E	
ANVUP	07°52'09"S 019°51'23"E	UM731
APDAR	14°02'00"S 022°00'00"E	UB528F, UB528F
APGAL (XUN190)	13°20'25"S 012°29'41"E	
APKAT (XUJ614)	11°40'04"S 013°21'55"E	
APKOK	07°18'00"S 018°08'47"E	UG450F
APNET	08°02'45"S 015°48'36"E	UA617F
APNUK	09°58'14"S 001°54'59"E	UR991F
APRAS	15°50'26"S 005°00'00"W	A611F, UA611F
APRIG	10°05'30"S 016°02'00"E	UA617F
ARAKI	05°18'07"S 010°43'57"E	A400F, UA400F
ARGOL	10°07'54"S 013°37'27"E	R987F
AVIGI	12°27'45"S 004°20'22"E	A611F, UA611F, UR991F
AVOVA	09°08'11"S 014°33'46"E	H600F, UH600F
AVUTA	06°55'59"S 012°37'40"E	R987F
AXUGO	09°38'40"S 019°15'38"E	UM998
BIRUT	09°22'07"S 012°00'25"E	A611F, UA611F
BOSNI	10°59'56"S 008°02'46"E	A611F, UA611F
BUDEL	05°53'02"S 014°41'59"E	A611F, UA611F
BUGRO	17°50'04"S 022°29'58"E	B733F, B733F, UB733F, UB733F, UM998, UM998
DEPAN	09°16'49"S 015°13'16"E	H600F, UH600F
DETKU	09°58'52"S 013°57'46"E	UV858F
DISPO	07°02'28"S 014°08'06"E	A611F, UA611F
EDLIN	06°04'50"S 016°59'31"E	G652F
EGNAB (AORRA GATE)	14°25'30"S 011°17'24"E	
EGNOS	14°05'19"S 000°00'03"E	A611F, UA611F
EGSUD	13°06'36"S 022°00'00"E	A400F, A400F, UA400F, UA400F
EKBOM	13°25'34"S 016°24'12"E	UA617F
ENBED	10°33'00"S 014°19'09"E	UV858F
EPLAT	07°36'30"S 012°43'53"E	R526F, UR526F
EPLAV	08°20'49"S 018°52'16"E	UM998
EPMES (AORRA GATE)	13°00'00"S 011°19'24"E	
EPNUL	13°35'38"S 022°00'10"E	UM731, UM731
ERDAB	08°22'00"S 015°50'42"E	UA617F
ESTOX	08°36'13"S 014°34'19"E	UH612F
ESVAS	08°48'32"S 015°53'35"E	UA617F
ETBON	10°49'40"S 012°55'05"E	W874F, UW874F
ETLOV (AORRA GATE)	16°00'00"S 011°15'24"E	
EVUKU (XUN190)	13°54'36"S 012°23'42"E	
EVUVI (FIR BDRY)	17°24'01"S 014°21'22"E	
EXALA	10°11'01"S 013°18'12"E	J614F, UJ614F
EXIGO	12°57'22"S 021°45'32"E	UM731
EXITO	06°59'22"S 012°28'27"E	R526F, UR526F
GAPEL	08°17'37"S 000°19'00"E	UR991F
GEBDO	08°28'51"S 015°14'00"E	UH612F

Name-code designator	Coordinates	ATS route or other route
1	2	3
IBKOK	08°14'45"S 015°10'28"E	UG450F
IBLUD (XUN190)	11°09'29"S 012°51'59"E	
ILDIN	07°38'33"S 013°50'24"E	A611F, UA611F
ILDIR	18°00'00"S 010°00'00"E	UR991F, UR991F
ILGER	17°27'03"S 010°00'00"W	A611F, A611F, UA611F, UA611F
ILGOL	12°42'09"S 014°23'13"E	R987F
IMLEX	07°34'14"S 012°50'02"E	R987F
IMRAS	08°49'45"S 014°35'40"E	H613F
IMTOP	09°26'26"S 015°57'43"E	UA617F
IMVEX (XUA617)	15°11'01"S 016°35'51"E	
IMVEX (XUT372)	15°11'01"S 016°35'51"E	
INUGA	07°10'45"S 018°31'15"E	UG450F, UG450F, UM998
ITNEL	05°50'06"S 015°34'17"E	UA617F, UA617F
ITPIK	12°12'16"S 005°00'00"E	A611F, UA611F
KILBI	09°37'13"S 018°34'14"E	B733F, H600F, UB733F, UH600F
KIMBU	09°23'52"S 014°28'32"E	A400F
KODOR	07°45'14"S 012°28'03"E	A400F, UA400F
KOSOK	06°31'51"S 017°25'03"E	G652F, UG652F
LIKAD	05°04'18"S 011°40'43"E	R526F, UR526F
LIRAM	10°51'10"S 013°19'53"E	J614F, UJ614F
LUBRA	08°01'57"S 017°36'05"E	B733F, UB733F, UH612F
MEMAS	09°47'11"S 014°12'27"E	G853F
NATAR	07°12'28"S 012°04'45"E	A400F, UA400F
NETIL (XUV858)	13°25'34"S 016°24'12"E	
NETOK	08°49'09"S 015°16'04"E	H613F
NEVIT	07°35'00"S 020°26'00"E	H613F
OKBIK (XUN190)	16°35'48"S 012°34'42"E	
OKDAT	08°15'24"S 019°03'29"E	H613F
OKSOR	07°40'18"S 019°27'12"E	UH612F, UH612F
OKTAG	12°29'03"S 012°38'22"E	W874F, UW874F
ONTAR	09°37'44"S 011°23'07"E	A611F, UA611F
OPAPO	07°48'07"S 011°29'57"E	G853F, UG853F
PORAT	07°30'18"S 020°17'29"E	A406F
RIVOM	07°49'45"S 018°38'59"E	G652F, UG652F, UH612F
SENAL	08°34'18"S 022°00'00"E	A406F, A406F
SHIMA	06°31'46"S 018°44'42"E	A406F
SIPLA	08°08'53"S 012°05'27"E	G853F
SOYO NDB (SO)	06°08'22"S 012°22'20"E	R987F
TERBA	04°47'54"S 006°35'00"E	G853F, UG853F
TIBAD	11°43'35"S 016°12'49"E	UA617F
TUTIM	10°15'21"S 014°41'22"E	G853F, UG853F
UB (NDB)	14°55'26"S 013°35'52"E	
UDANO	10°10'01"S 013°01'42"E	W874F, UW874F
UDMON	15°03'32"S 006°56'18"E	UR991F
UDNOR	11°33'55"S 023°56'57"E	G652F, G652F, UG652F, UG652F
UNDOS	08°26'48"S 014°31'58"E	UG450F
UTSAG (AORRA GATE)	08°49'33"S 011°13'39"E	
UVAGO	07°33'58"S 017°19'07"E	B733F, UB733F, UG450F
UVAMO	10°46'28"S 013°48'49"E	R987F
VNA (VOR)	08°50'43"S 013°14'51"E	
VMO (VOR)	15°15'12"8S 012°09'54"E	
VOTAL	09°40'24"S 015°05'26"E	A400F, UA400F

ENR 5.1 RESTRICTED AIRSPACES AND DANGER AREAS

All air space in which a potentional hazard to aircraft operation may exist and all areas over which the operations of civil aircraft may, for one reason or another be restricted either temporarily, or permanently, are classified according to the following three types of areas as defined by ICAO.

Danger Area
An airspace area of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times. Use of this term is appropriate only when the potential danger to aircraft in flight over the area has not led to the designation of an area as restricted or prohibited. The effect of the creation of the danger area is to caution operators or pilots or aircraft that it is necessary for them to assess the danger in relation to their responsibility for the safety to their aircraft. When the potential danger is within or over the land areas of a state or territorial waters adjacent thereto, the State concerned may decide that the potential danger can be adequately met by creating a danger area and that is no necessary to create a restricted or prohibited area.

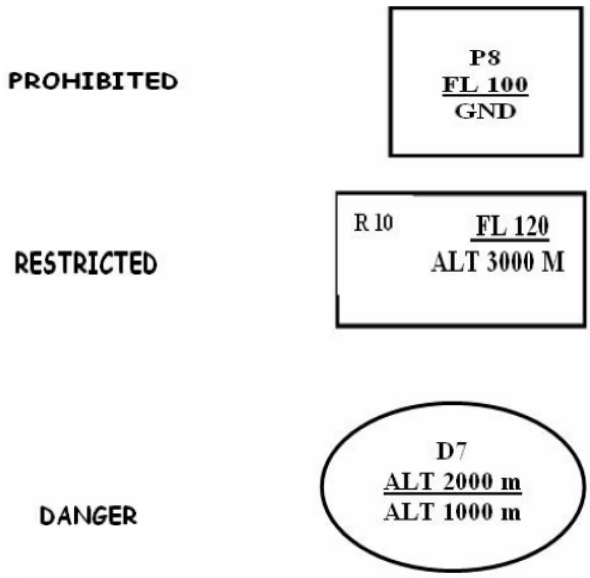
Prohibited Area
An airspace of defined dimensions, above the land areas or territorial waters of a state, within which the flight of aircraft is prohibited. Use of this term is appropriate only when the flight of civil aircraft within a portion of airspace coming within the scope of definition is not permitted at any time or under any circumstances.

Restricted Area
An airspace of defined dimensions, above the land areas or territorial waters of a state, within which the flight of aircraft is prohibited. Use of this term is appropriate only when the flight of civil aircraft within a portion of airspace coming within the scope of definition is not permitted at any time or under any circumstances.

This, prohibition of flight except as certain specified time, leads the designation of the airspace as a restricted area as would prohibition excepted in certain meteorological obtained conditions. Similarly prohibition of flight unless specify permission had been obtained, would lead to the designation of a restricted area. However, conditions of flight imposed as a result of application of rules of air traffic service practices or procedures (for example, compliance with minimum safe heights or with rules stemming from the establishment of controlled airspace) do not constitute conditions calling for designation a restricted area.

Each area is numbered and a single series of numbers is used for all areas regardless of type, "R" to ensure that a number is never duplicated.

The type of area involved is indicated by the letter "P" for prohibited "R" for restricted and "D" for danger, preceded by the nationality letter "FN." For example areas are assigned numbers and letters in the following manner FNP1, FNR11, FND7, etc.



The upper and lower are shown in the manner indicated. Altitudes are given in meters.

DESIGNATION AND NAME LATERAL LIMIT	UPPER LIMIT LOWER LIMIT	TYPE OF RESTRICTION	REMARKS
1	2	3	4
PROHIBITED AREAS			
FNR11			
Area bounded by lines joining successively the following points: 7°56'00.0"S - 013°13'00.0"E 07°56'00"S - 013°28'00"E 08°10'00"S - 013°15'00"E 08°19'00"S - 013°20'00"E	10.000 Ft Alt / SFC	Training Flights	
FNR12			
Area bounded by lines joining successively the following points: 09°03'00"S - 013°04'00"E 9°10'00.0"S - 013°08'00.0"E 09°07'00"S - 013°00'00"E 09°17'00"S - 013°06'00"E	5000 Ft Alt / SFC	Area Activity	The flights will be able to realize only into this area by means of foreseen authorization Pt. The authorizations will be able to be required to Luanda ACC before taking off Pt.
FNR13			
Area bounded by lines joining successively the following points: 9°56'00.0"S - 013°09'00.0"E 09°59'00"S - 013°16'00"E 09°08'00"S - 013°17'00"E 09°10'00"S - 013°08'00"E 09°03'00"S - 013°04'00"E	1500Ft GND	Training Flights	
FNR14			
Area bounded by lines joining successively the following points: 8°38'00.0"S - 013°24'00.0"E 08°38'00"S - 013°27'00"E 08°45'00"S - 013°26'00"E 08°45'00"S - 013°24'00"E	1500 Ft Alt / SFC	Activity Area	The flights will be able to take place inot these areas by means of foreseen authorization. The authorizations will be required to Luanda TWR or ACC before taking off.
RESTRICTED AREAS			
FNR10			
Area bounded by lines joining successively the following points: 8°49'00.0"S - 013°43'00.0"E 8°49'00.0"S - 014°03'00.0"E 9°07'00.0"S - 014°03'00.0"E 9°07'00.0"S - 013°56'00.0"E 9°00'00.0"S - 013°43'00.0"E	10.000 Ft Alt / SFC	Training Flights	Flights forbidden during activity periods
FNR8			
Area bounded by lines joining successively the following points: 9°05'00.0"S - 013°10'00.0"E 9°05'00.0"S - 013°20'00.0"E 9°41'00.0"S - 013°35'00.0"E 9°41'00.0"S - 012°57'00.0"E	FL150 GND	Training Flights	Flights forbidden during activity periods

ENR 5.2 MILITARY EXERCISE AND TRAINING AREAS

See ENR 5.1

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ENR 5.3 OTHER ACTIVITIES OF DANGEROUS NATURE

NIL

Intentionally left blank

ENR 5.4 AIR NAVIGATION OBSTACLES EN-ROUTE

IDENTIFICATION	TYPE OF OBSTACLES	COORDINATES	ELEVATION HEIGHT GROUND(m)	OBSTACLES LIGHT
Nambuangongo	Mast	08º01′S 014º12″E	50	Yes
Camembe	Mast	08º08′S 014º30″E	50	Yes
Mucondo	Mast	08º14′S 014º33″E	50	Yes
Quicalo	Mast	08º19′S 013º50″E	50	Yes
Faz. Margarido	Mast	08º21′S 014º13″E	50	Yes
Camaxilo	Mast	08º22′S 018º56″E	50	No
Quibaxi	Mast	08º30′S 014º56″E	50	Yes
Piri	Mast	08º31′ S 014º26″E	50	Yes
Ucua	Mast	08º39′ S 014º10″E	50	No
Kwanza	Mast	09º11′ S 013º07″E	50	No
Catete (km 44)	Mast	09º02″ S 013º35″E	50	No
Mabubas	Mast	08º32′ S 013º42″E	50	No
Barra do Dande	Mast	08º28′ S 013º22E	50	No
Ambriz	Mast	07º50′ S 013º06″E	50	No
NZeto	Mast	07º14′ S 013º52″E	60	No
Kiele	Tower	08º58′ S 013º28″E	50	No
Mutões	Mast	09º00′ S 013º30″E	64	Yes
Cassoneca	Tower	09º09′ S 013º51″E	50	Yes
NDalatando	Tower	09º17′ S 014º54″E	84	Yes
Malange	Tower	09º33′S 016º21″E	50	Yes
Malange	Group of Mast	09º33′S 016º22″E	50	Yes
Caculama	Mast	09º29′S 016º51″E	60	No
Lukapa	Mast	08º25′ S 020º45″E	51	Yes
Calanda	Mast	08º30′ S 020º33″E	51	Yes
Melanda	Mast	08º16′ S 021º00″E	51	Yes
Maludi	Mast	08º01′ S 021º18″E	75	Yes
Negage	Tower	07º46′ S 015º16″E	57	Yes
Uíge	Tower	07º37 S 015º04″E	85	Yes
Uíge	Group of Mast	07º36′ S 015º03″E	75	Yes
MBanza Congo	Mast	06º16′S 014º15″E	70	Yes
Soyo	Mast	06º07′ S 012º18″E	50	Yes
Malembo	Tower	11º00′ S 014º51″E	50	No
Gabela	Tower	10º51′ S 014º23″E	82	Yes
Sumbe	Mast	10º51′ S 014º23″E	82	Yes

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ENR 5.5 AERIAL SPORTING AND RECREATIONAL ACTIVITIES

NIL

Intentionally left blank

ENR 5.6 BIRD MIGRATION AND AREAS WITH SENSITIVE

NIL

Intentionally left blank

ENR 6.1 EN-ROUTE CHARTS

To be developed

Intentionally left blank

ENR 6.2 AIR TRAFFIC SERVICES INDEX CHART

To be developed

Intentionally left blank

ENR 6.3 PROHIBITED, RESTRICTED AND DANGER AREAS INDEX CHART

To be developed

Intentionally left blank

ENR 6.4 MILITARY TRAINING AREAS INDEX CHART

To be developed

Intentionally left blank

ENR 6.5 OTHER ACTIVITIES OF DANGEROUS NATURE INDEX CHART

To be developed

Intentionally left blank

ENR 6.6 AERIAL SPORTING AND RECREATIONAL ACTIVITIES INDEX CHART

To be developed

Intentionally left blank

ENR 6.7 RADIO FACILITY INDEX CHART

To be developed

Intentionally left blank

ENR 6.8 BIRD MIGRATION ROUTES INDEX CHART

To be developed

Intentionally left blank

ENR 6.9 BIRD CONCENTRATIONS AND AREAS WITH SENSITIVE FAUNA INDEX CHART

NIL

Intentionally left blank

ANGOLAN CIVIL AVIATION AUTHORITY

AIP

AERONAUTICAL INFORMATION SERVICE

PART 3

AERODROME (AD)

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AD 0.6 TABLE OF CONTENTS TO PART 3

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AD 1.1 AERODROMES AVAILABILITY

1. General conditions under which aerodromes/heliports and associated facilities are available for use.

1.1 The conditions under which aircraft may land, be parked, housed or otherwise dealt with at any of the aerodromes under the control of the Civil Aviation Authority (here in after referred to as) "The Authority" are as follows;

1.1.1 The fees and charges for the landing, parking or housing of aircraft shall be those published by the authority in the AIP or NOTAM. The fees and charges for any supplies or services which may be furnished to the aircraft at any aerodrome under the control of the authority by or on behalf of the authority shall, unless it is otherwise agreed before such fees or charges are incurred, be such fees and charges as may be determined by the authority for that aerodrome. The fees and charges referred to in this paragraph shall accrue from day to day and shall be payable to the authority on demand.

1.1.2 The authority shall have a lieu with priority on the aircraft, its parts and accessories as to enforce the payment of such fees and charges.

1.1.3 If payment of such fees and charges is not made to the authority within thirty days after a letter demanding payment there of has been sent to the registered owner of the aircraft, the authority shall be entitled to bring action against the aircraft, in one of the Angolan concerned courts which could result in the sell, removal of otherwise disposal of the aircraft and any of its parts and accessories, and to apply the proceeds from so doing to the payment of such fees and charges.

1.1.4 Neither the authority nor any servant or agent of the Government shall be liable for loss of or damage to the aircraft, its parts or accessories or any property contained in the aircraft however such loss or damage may arise, occurring while the aircraft is on any of the aerodromes under the control of the authority or is in the course of landing and taking-off at any such aerodrome, or of being removed or dealt with elsewhere for the purpose of paragraph 1-1.3 of these conditions.

1.2 Landing made elsewhere than at international airports

1.2.1 If an aircraft, for reasons of an unavoidable cause, is compelled to take its landing elsewhere than at an international airport or designated alternate airport, the pilot-in-command shall report the landing as soon as practicable to the international airport at which the scheduled landing was to take place.

1.2.2 This notification may be made through air-ground channels if this method of communication is available, or by telephone or telegram. If the pilot-in-command is unable to contact the international airport or designated alternate airport, he shall try to inform of his landing to the nearest aerodrome police or military authority.

1.2.3 In this respect, the pilot-in-command shall be responsible for ensuring that:

1) If permission has not been granted to the aircraft at the previous landing, contact between other persons on the one hand and the passengers and crew on the other is avoided;
2) Cargo, baggage and mail are not removed from the aircraft except as provided below:
   a) any food stuff(s) or beverage of overseas origin, or any plant material shall not be removed from the aircraft except where local food is unobtainable;
   b) All food refuse including peelings, cores, stones of fruit etc. must be collected and returned to the galley refuse container, the contents of which should not be removed from the aircraft except for hygienic reasons, in which case they must be destroyed by burning or deep burial.

1.3 Applicable ICAO Documents

This part of the Aeronautical information publication (AIP) has been prepared in accordance with the Standards and recommended practices of Annex 15 to the Chicago Convention 1944, and other applicable documents.

1.4 Traffic of persons and vehicles on aerodromes

1.4.1 Demarcation of zones

a) The grounds of each aerodrome are divided into two zones:
   - a public zone comprising the part of the aerodrome open to the public;
   - a restricted zone comprising the rest of the aerodrome.

1.4.2 Movement of persons

All areas of the airport except those areas open to the public are restricted and no person shall enter Customs, Immigration or Public Health (Quarantine) areas, any private offices, hangars, maintenance areas, landing areas, ramp and apron areas or any restricted area on the airport posted as being closed to the public except:

a) Persons assigned to duty or having official business there in:
b) authorised representatives of INAVIC and ENANA-E.P;
c) Persons having prior permission of the ENANA-E.P;
d) Passengers under appropriate supervision, entering upon the ramp and apron areas for purposes of embarkation or disembarkation.

1.4.3 Movement of vehicles

1) The movement of vehicles in the restricted zone is strictly limited to vehicles driven or used by persons carrying a traffic permit, an official card or admittance from the Airport Administration.
2) Drivers of vehicles, of whatever type, driving within the confines of the aerodrome, must comply with the general direction followed by other traffic respect the traffic signs, the posted speed limits and generally comply with the provisions of the highway Code and with the instructions given by the competent authorities.
3) No person shall operate a vehicle on the airport in a careless or negligence manner, in disregard of the rights and safety of others, without due caution or circumspection, at a speed or in a such a manner which endangers or is likely to endanger persons or property, or while he is under the influence of intoxicating liquor or any narcotic or habit forming drug.
4) No person shall park a vehicle or leave a machine on any airport highway, or storage area, except at such places and for such periods of time as may be prescribed or permitted by the Airport Administration

2. **POLICING**

Care and protection of aircraft, vehicles, equipment and goods for which the aerodrome facilities are used are not the responsibility of the state or any concessionaire, who can not be held responsible for loss or damage which is not incurred through action by them or their agents.

3. **Applicable ICAO document**

ICAO standards and recommended practices contained in Annex 14 Volumes I and II are applied without differences

4. **Civil use of military aerodromes**

Civil aircraft are not permitted to land at any aerodrome not listed in this AIP except in cases of real emergency or where special permission has been granted from military aeronautical authority.

5. **CAT II/III Operations at aerodromes**
Not applicable

6. **Friction measurement device used and friction level below which rwy is declared slippery when it is wet**
Not available

7. **Other information**
NIL

AD 1.2 RESCUE AND FIRE FIGHTING SERVICES AND SNOW PLAN

1. RESCUE AND FIRE FIGHTING SERVICES

Adequate rescue and fire fighting vehicles, equipment and personnel have been provided at Angola international airports available for use by international commercial air transport. Foamatic and rapid intervention vehicles are available at Angola domestic airports. The scale of protection has been determined in accordance with the guidance in attachment A to Annex 14 and is indicated in AD-2. The number of trained personnel available is also indicated. Each rescue and fire fighting unit is controlled by the local airport administration. Full service on a 24 hour basis is normally provided only at Luanda international airport.

2 SNOW PLAN

Not applicable.

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AD 1.3 INDEX TO AERODROMES

Aerodrome name location indicator	Type of traffic permitted to use the aerodrome/heliport			Reference to AD Section and remarks
	International – National (INTL-NTL)	IFR-VFR	S = Scheduled NS = Non-scheduled P = Private	
1	2	3	4	5
BENGUELA/17 De Setembro	NTL	IFR-VFR	S	AD2-FNBG
CABINDA/Cabinda	NTL	IFR-VFR	S	AD2-FNCA
HUAMBO/Albano Machado	NTL	IFR-VFR	S	AD2-FNHU
LUANDA/4 De Fevereiro	INTL-NTL	IFR-VFR	S	AD2-FNLU
LUBANGO/Mukanka	INTL-NTL	IFR-VFR	S	AD2-FNUB
LUENA/Moxico	NTL	IFR-VFR	S	AD2-FNUE
NAMIBE/Yuri Gagarin	NTL	IFR-VFR	S	AD2-FNMO
ONDJIVA/Ondjiva	NTL	IFR-VFR	S	AD2-FNGI
SAURIMO/Saurimo	NTL	IFR-VFR	S	AD2-FNSA

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AD 1.4 GROUPING OF AERODROME

The criteria applied by the Republic of Angola in grouping aerodrome for the provision of information in this AIP are as follows:

1. International aerodromes

a) Aerodromes of entry and departure for international air traffic, where all formalities concerning customs, immigration, health, animal and plant quarantine and similar procedures are carried out and where air traffic services are available on a regular basis;
b) Secondary/Other international aerodrome.

2. Domestic aerodromes/heliports

Aerodromes/heliports are available for domestic air traffic only, after previous co-ordination with Civil Aviation Authority.

3. Military aerodromes

Aerodromes where air traffic is permitted solely with prior authorization of the Military Aeronautical Authority.

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1	LOCATION INDICATOR	AERODROME NAME	
	FNBG	BENGUELA/17 DE SETEMBRO	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	12º36'36''S E013º24'13''
2	Direction and distance from city	S/3 KM from Benguela
3	Elevation/Reference temperature	35M/113FT/30.0ºC
4	Magnetic variation/Annual change	7.2ºW (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	NIL
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	HJ
9	Handling	NIL
10	Security	NIL
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	JET A1/NIL
3	Fuelling capacity	30 000 Litres
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS che	NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	THR; RWY CL markings
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Water TWR 54.5 M		
			Military Power Mast 42.6 M		
			Factory Chimney 33.0 M		
			Radio Mast 119.8 M		

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	**TWY (Width)**	**True Bearing**	**Dimension of RWY (M)**	**Strength (PCN) and surface of RWY and SWY**	**THR coordinates**	**THR Elevation and Highest elevation of DTZ of precision APP RWY**
1	2	3	4	5	6	7
14	18 m	130.21	1620 X 30	10/F/B/X/U ASPH	12^{0}36´16" S 013^{0}23'53" E	
32		310.21	1620 X 30	10/F/B/X/U ASPH	12^{0} 36´49" S 013^{0} 24' 33" E	

Designation RWY Nº	**Slope of RWY-SWY**	**SWY Dimention (M)**	**CWY Dimention (M)**	**Strip dimensions (M)**	**OFZ**	**Remarks**
1	8	9	10	11	12	13
14	0.31%	NIL	NIL	NIL	NIL	HAZARDS-PEOPLE AND ANIMALS ALONG THE RWY
32	-0.31%	NIL	NIL	NIL	NIL	HAZARDS-PEOPLE AND ANIMALS ALONG THE RWY

13	DECLARED DISTANCES

RWY designator	**TORA (M)**	**TODA (M)**	**ASDA (M)**	**LDA (M)**	**APRONS**
1	**2**	**3**	**4**	**5**	**6**
14	1620	1820	1620	1620	(150 m x 100 m)
32	1620	1820	1620	1620	

14	**APPROACH AND RUNWAY LIGHTING**

RWY ID	**APPROACH Lights** **Type** **Lenght** **Intensity**	**Treshold Lights** **Colour** **WBAR**	**VASIS PAPI**	**TDZ Lights** **Length**	**RWY CL Lights** **Spacing** **Colour** **Intensity**	**RWY DGE Lights** **Spacing** **Colour** **Intensity**	**RWY END Lights** **Colour** **WBAR**	**SWY Lights** **Length** **Colour**	**Remarks**
1	2	3	4	5	6	7	8	9	10
14									
32									

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	Call sign	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	1	2	1	2	1
AFIS	Benguela Tower	118.7	NIL	A3	HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	ID	Frequency	Coordinates	Emission	Operational hours	Remarks
1	**2**	**3**	**4**	**5**	**6**	**7**
NDB	BG	372.0 KHZ	12º36’29’’S 013º24’19’’E	NIL	H24	100 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact Benguela Tower
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE ''BG'' NDB RWY 19	
1.1	General Information	
	1. Transition Level	By TWR
	2. Transition Altitude	3000 FT
	3. Minimum Sector Altitude	5600 FT
	a) Within 25 NM of ''BG'' NDB ___ EAST SECTOR EAST SECTOR SW SECTOR NW	4400 FT 5600FT 4400 FT 2400 FT
	4. Aerodrome Elevation	118 FT
	5. Threshold Elevation	102 FT
1.2	Navigation	
	NDB ''BG''	372 KHZ
1.3	En route Segment	Aircraft arrive from E and SW sector shall be at minimum enroute flight levels and shuttle to 3000 feet QNH overhead ``BG´´ NDB.
1.4	Holding On ``BG´´ NDB	NIL
1.5	Initial Segment	NIL
1.6	Intermediate Segment	NIL
1.7	Final Approach Segment	NIL
1.8	Missed Approach Segment	NIL

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO BENGUELA/ 17 De Setembro AERODROME

	Charts	Pages
	Instrumental Approach Chart (IAC) NDB RWY 14	AD 2 FNBG 2-1

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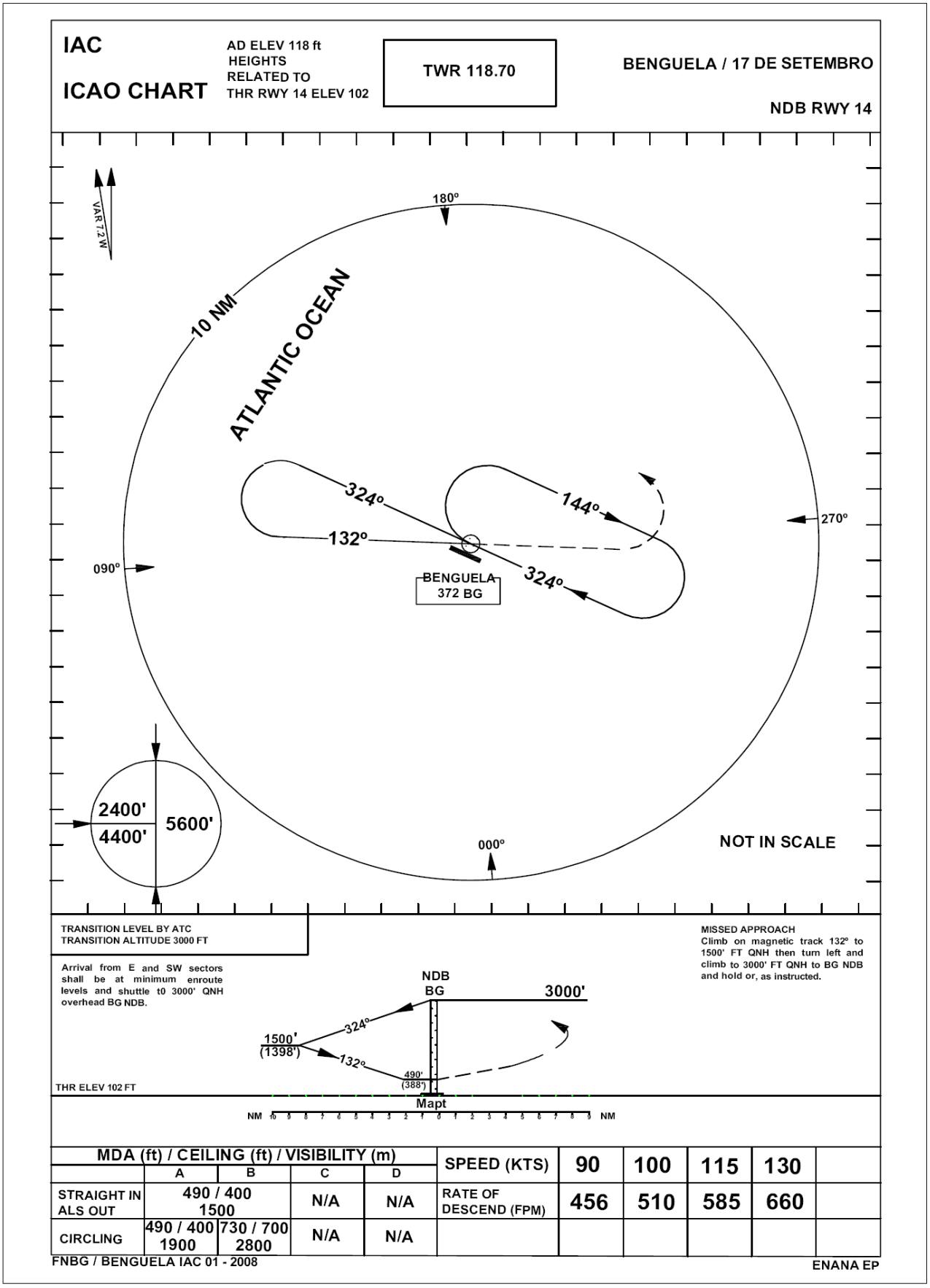
IAC
ICAO CHART
AD ELEV 118 ft
HEIGHTS
RELATED TO
THR RWY 14 ELEV 102
TWR 118.70
BENGUELA / 17 DE SETEMBRO
NDB RWY 14
VAR 7.2W
180º
10 NM
ATLANTIC OCEAN
324º
144º
132º
270º
090º
BENGUELA
372 BG
324º
2400'
4400'
5600'
000º
NOT IN SCALE
TRANSITION LEVEL BY ATC
TRANSITION ALTITUDE 3000 FT
Arrival from E and SW sectors shall be at minimum enroute levels and shuttle t0 3000' QNH overhead BG NDB.
MISSED APPROACH
Climb on magnetic track 132º to 1500' FT QNH then turn left and climb to 3000' FT QNH to BG NDB and hold or, as instructed.
NDB
BG
3000'
1500'
(1398')
324º
132º
490'
(388')
THR ELEV 102 FT
Mapt
NM
NM
MDA (ft) / CEILING (ft) / VISIBILITY (m)
SPEED (KTS)
90
100
115
130
A
B
C
D
STRAIGHT IN ALS OUT
490 / 400
1500
N/A
N/A
RATE OF DESCEND (FPM)
456
510
585
660
CIRCLING
490 / 400
1900
730 / 700
2800
N/A
N/A
FNBG / BENGUELA IAC 01 - 2008
ENANA EP

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1	LOCATION INDICATOR	AERODROME NAME	
	FNCA	CABINDA/Cabinda	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	05º35'12''S E012º11'19''
2	Direction and distance from city	S/4 KM from CABINDA
3	Elevation/Reference temperature	20M/66FT/28.0ºC
4	Magnetic variation/Annual change	4.4ºW (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP 031-22707
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	HJ
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	HJ
9	Handling	NIL
10	Security	HJ
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	JET A1/NIL
3	Fuelling capacity	30 000 Litres
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS checkpoints	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Harris Microwave TWR 203.0 M	05º35’39’’S 012º12’06’’E	
			Microwave Comms TWR 140.6 M	05º34’18’’S 012º12’01’’E	
			Military Comms TWR 142.4 M	05º34’15’’S 012º11’60’’E	
			Emission Center 115.2 M	05º34’01’’S 012º11’37’’E	
			Hospital TWR 81.0 M	05º33’34’’S 012º11’50’’E	
			Church Spire 67.3 M	05º33’30’’S 012º11’32’’E	
			Cabinda Telecom 66.5 M	05º33’31’’S 012º11’40’’E	

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	TWY (Width)	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6	7
18	"A" 22	178.99 T	2500 x 30	39/F/B/X/U - ASPH	05° 35' 09'' S 012° 11' 17'' E	
36	"B" 22	358.99 T	2500 x 30	39/F/B/X/U - ASPH	05° 36' 30'' S 012° 11' 18" E	

Designation RWY Nº	Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
1	7	8	9	10	11	12
18	- 0.26%	NIL	NIL	NIL	NIL	
36	0.26%	NIL	NIL	NIL	NIL	

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	**2**	**3**	**4**	**5**	**6**
18	2500	2500	2500	2500	200 X 75 m
36	2500	2650	2630	2500	

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
18	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
36	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
CTR CABINDA CTR 05º35'00''S 012º11'07''E 05º35'00''S 012º11'07''E	GND 3000FT	(C)	NIL	914FT (3000 M) MSL	NIL

18	ATS COMMUNICATION FACILITIES

Service	**Call sign**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	2	3	4	5	6	7
ATC	Cabinda Tower	118.3 MHZ	NIL		HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	**ID**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**	**7**
VOR/DME	VCA	114.3MHZ CH 90X	05º38'04''S 012º11'22''E	NIL	H24	100NM
NDB	CA	280.0 KHZ	05º35'05''S 012º11'22''E	NIL	H24	100 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact Tower
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE ''CA'' NDB RWY 18	
1.1	General Information	
	1) Transition Level	**By TWR**
	2) Transition Altitude	**3000 FT**
	3) Minimum Altitude	
	a) Within 25 NM of ''CA'' NDB (ALL SECTORS)	2500 FT
	4) Aerodrome Elevation	**66 FT**
	5) Threshold Elevation RWY 18	**66 FT**
1.2	Navigation	
	NDB "CA''	**280 KHZ**
1.3	En route Segment	Aircraft arrive overhead "CA" NDB at minimum enroute flight levels and shuttle on holding pattern to transition altitude 3000 feet QNH.
1.4	Holding On ``CA´´ NDB	See chart
1.5	Initial Segment	See chart
1.6	Intermediate Segment	See chart
1.7	Final Approach Segment	See chart
1.8	Missed Approach Segment	See chart

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO CABINDA/ Cabinda AERODROME

	Charts	Pages
	Instrumental Approach Chart (IAC) NDB RWY 18	AD 2 FNCA 2-1

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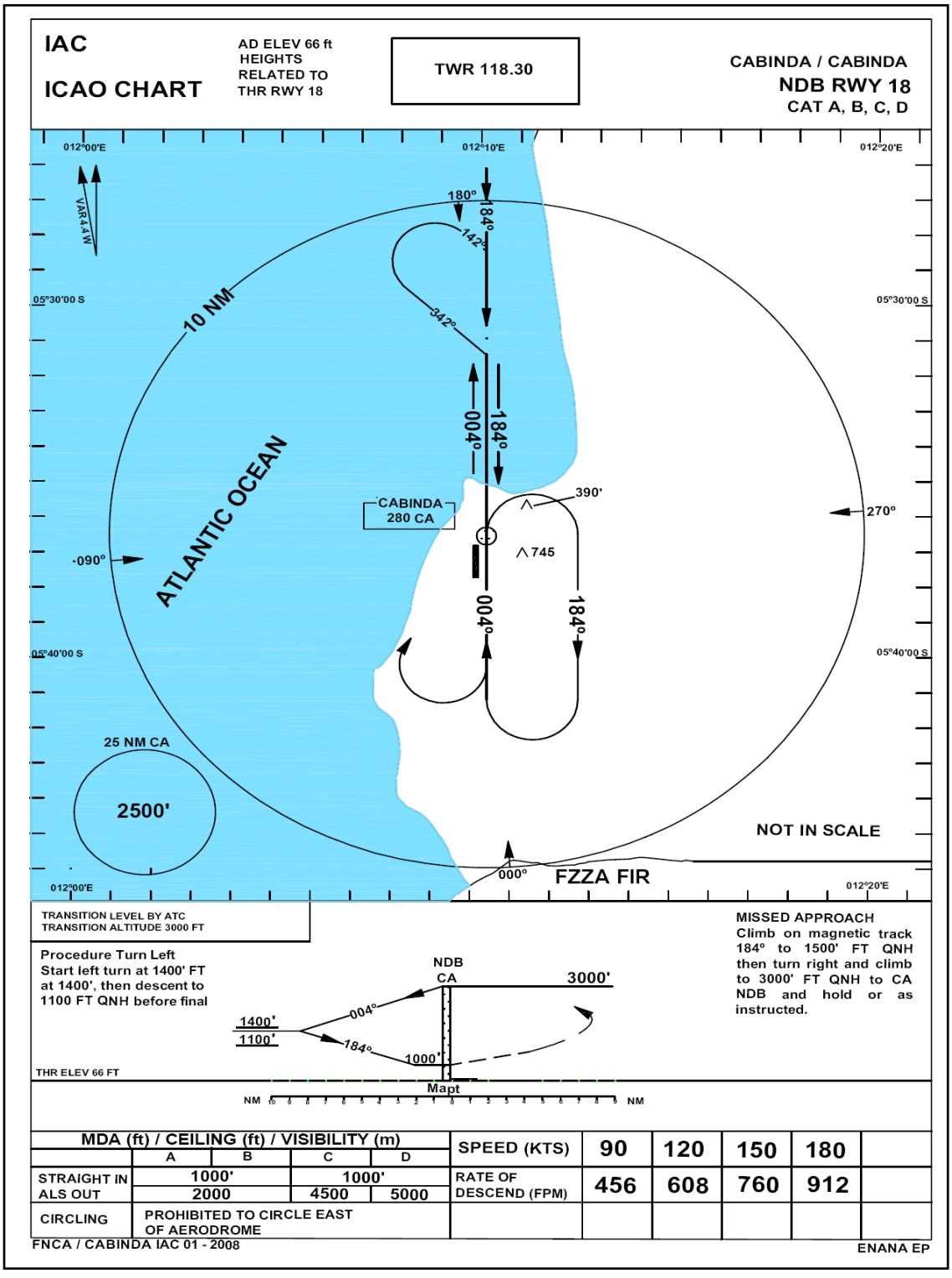
IAC
ICAO CHART
AD ELEV 66 ft
HEIGHTS
RELATED TO
THR RWY 18
TWR 118.30
CABINDA / CABINDA
NDB RWY 18
CAT A, B, C, D
012°00'E
012°10'E
012°20'E
05°30'00 S
05°40'00 S
VAR 4.4°W
180°
184°
142°
342°
10 NM
004°
184°
CABINDA
280 CA
390'
270°
090°
745
ATLANTIC OCEAN
25 NM CA
2500'
NOT IN SCALE
000°
FZZA FIR
TRANSITION LEVEL BY ATC
TRANSITION ALTITUDE 3000 FT
Procedure Turn Left
Start left turn at 1400' FT
at 1400', then descent to
1100 FT QNH before final
NDB
CA
3000'
1400'
1100'
004°
184°
1000'
THR ELEV 66 FT
Mapt
NM
NM
MISSED APPROACH
Climb on magnetic track
184° to 1500' FT QNH
then turn right and climb
to 3000' FT QNH to CA
NDB and hold or as
instructed.
MDA (ft) / CEILING (ft) / VISIBILITY (m)
A
B
C
D
SPEED (KTS)
90
120
150
180
STRAIGHT IN
ALS OUT
1000'
2000
1000'
4500
5000
RATE OF
DESCEND (FPM)
456
608
760
912
CIRCLING
PROHIBITED TO CIRCLE EAST
OF AERODROME
FNCA / CABINDA IAC 01 - 2008
ENANA EP

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1	LOCATION INDICATOR	AERODROME NAME	
	FNGI	ONDGIVA/Ondgiva	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	17º02'36''S E015º41'02''
2	Direction and distance from city	S/5.5 KM from ONDJIVA
3	Elevation/Reference temperature	1087M/3567FT/29.0ºC
4	Magnetic variation/Annual change	9.1ºW (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	HJ
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	HJ
9	Handling	NIL
10	Security	HJ
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	NIL/NIL
3	Fuelling capacity	NIL
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS checkpoints	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Apron light 1158.37 M	17º04’05’’S 015º43’42’’E	
			Airport cell 1157.19 M	17º03’21’’S 015º41’35’’E	
			Telecom 1180.59 M	17º03’56’’S 015º43’28’’E	

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	TWY (Width)	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6	7
13	"A" 22	114.85 T	3200 x 30	39/F/B/X/U	17º02' 14" S 015º 41' 12" E	
31	"B" 22	294.85 T	3200 x 30	39/F/B/X/U	17º02' 58" S 015º 41' 52" E	

Designation RWY Nº	Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
1	8	9	10	11	12	13
13	NIL	NIL	NIL	NIL	NIL	NIL
31	NIL	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	2	3	4	5	6
13	3,240	3,240	3,740	3240	73 m x169 m
31	3,240	3,240	3,740	3240	

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
13	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
31	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	**Call sign**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	2	3	4	5	6	7
AFIS	ONGIVA Tower	118.7 MHZ	NIL		HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	**ID**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**	**7**
NDB	GI	327.0 KHZ	17º02’55’’S 015º41’30’’E	NIL	H24	50 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact AFIS
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE ''GI'' NDB RWY 13	
1.1	General Information	
	1) Transition Level	**By TWR**
	2) Transition Altitude	**6000 FT**
	3) Minimum Sector Altitude	
	a) Within 25 NM of ''GI'' NDB (ALL SECTORS)	5000 FT
	4) Aerodrome Elevation	**3657 FT**
	5) Threshold Elevation	**3645 FT**
1.2	Navigation	See Chart
1.3	En route Segment	Aircraft arrive overhead "GI" NDB at minimum enroute flight levels and shuttle on holding pattern to transition altitude 6000 FT QNH.
1.4	Holding On ``GI´´ NDB	See Chart
1.5	Initial Segment	See Chart
1.6	Final Approach Segment	See Chart
1.7	Missed Approach Segment	See Chart

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO ONDGIVA/Ondgiva AERODROME

	Charts	Pages
	ONDGIVA SID RWY 13	AD 2 FNGI 2-1
	ONDGIVA SID RWY 31	AD 2 FNGI 2-2
	ONDGIVA NDB RWY 13 IAC	AD 2 FNGI 2-3
	ONDGIVA NDB RWY 31	AD 2 FNGI 2-4
	ONDGIVA GNSS RWY 13 CAT ABCD	AD 2 FNGI 2-5
	ONDGIVA GNSS RWY 31 CAT ABCD	AD 2 FNGI 2-6

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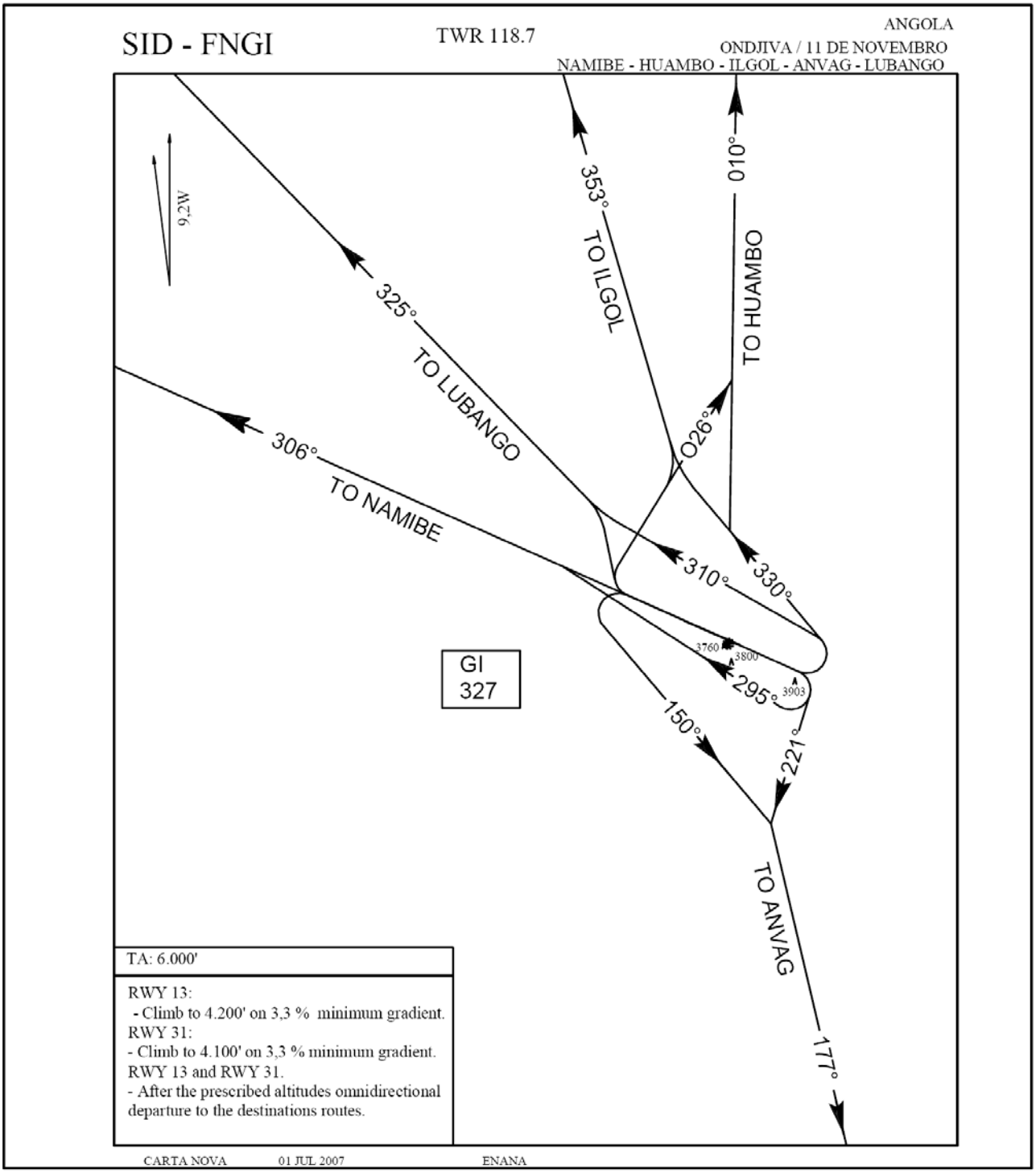
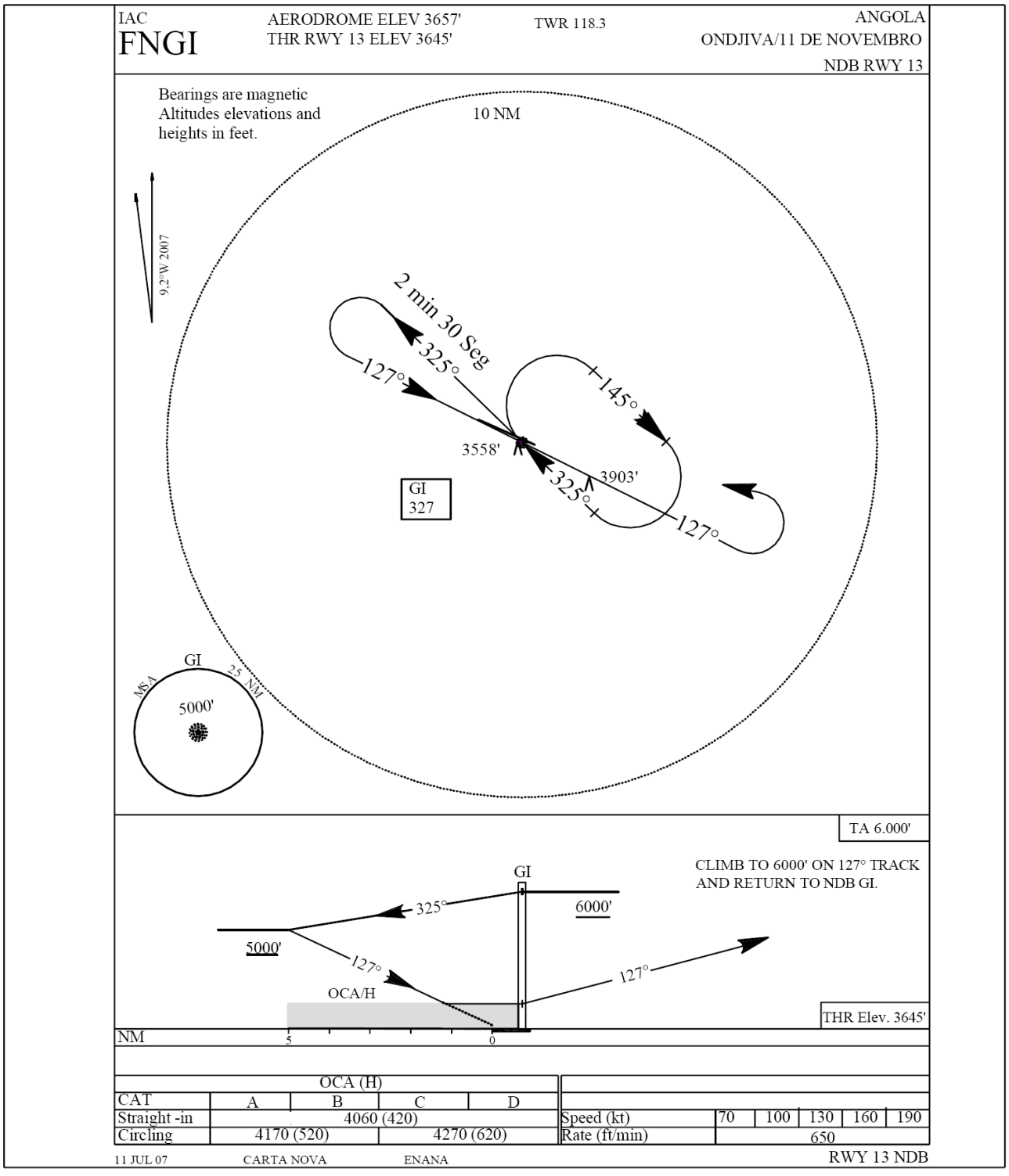
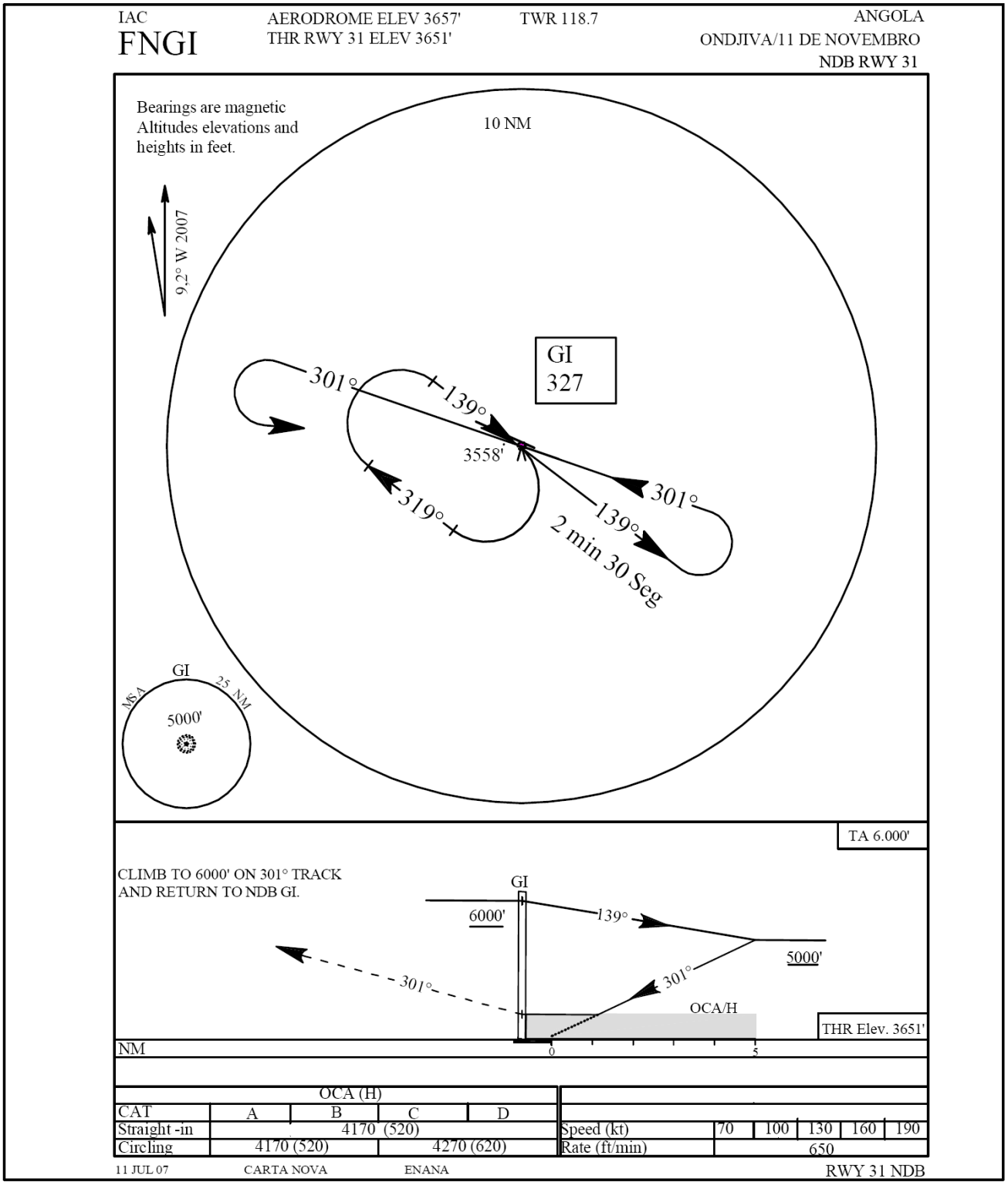
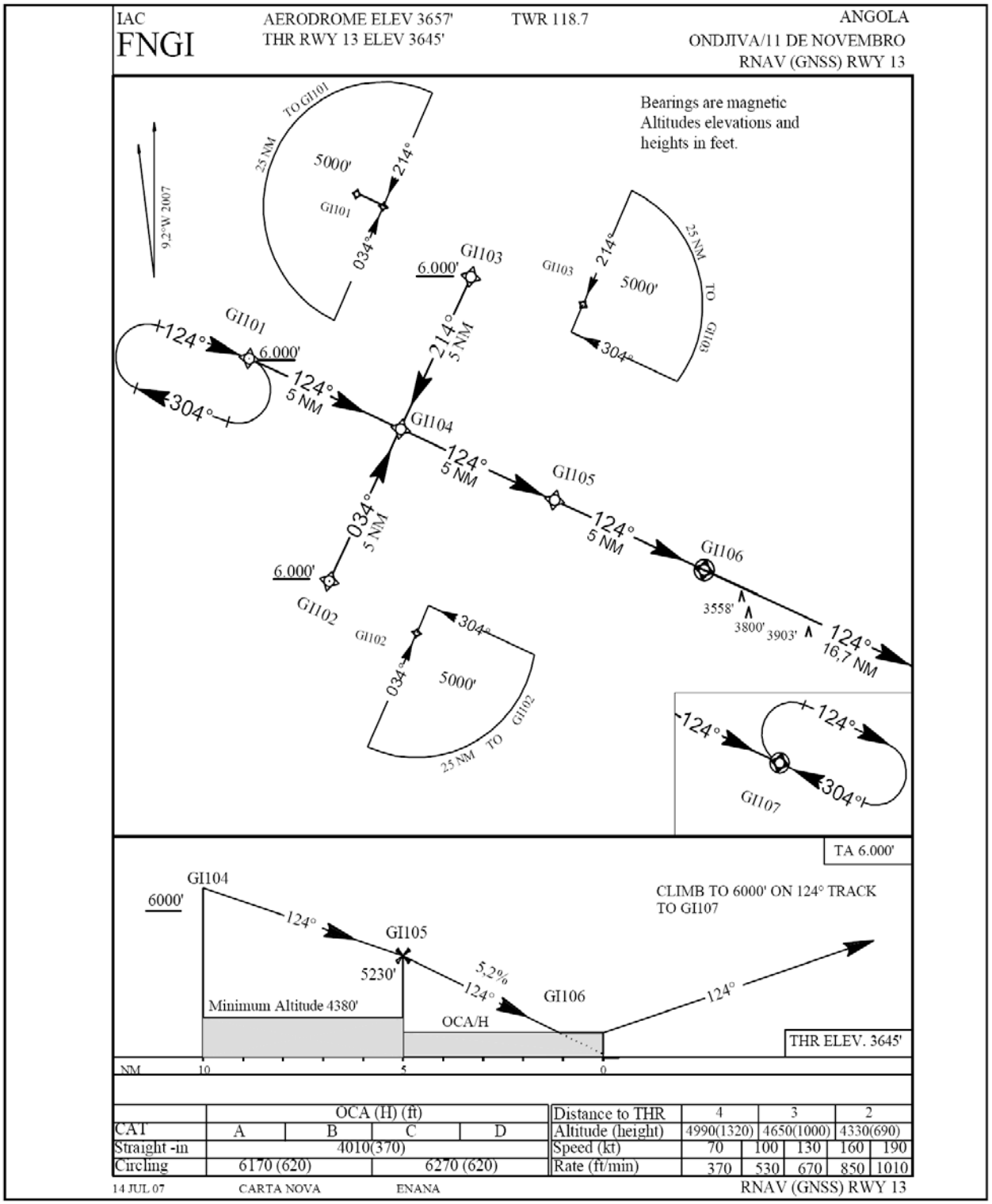

SID - FNGI
TWR 118.7
ANGOLA
ONDJIVA / 11 DE NOVEMBRO
NAMIBE - HUAMBO - ILGOL - ANVAG - LUBANGO
9,2W
353°
TO ILGOL
010°
TO HUAMBO
325°
TO LUBANGO
026°
306°
TO NAMIBE
310°
330°
3760
3800
295°
3903
GI
327
150°
221°
TO ANVAG
177°
TA: 6.000'
RWY 13:
- Climb to 4.200' on 3,3 % minimum gradient.
RWY 31:
- Climb to 4.100' on 3,3 % minimum gradient.
RWY 13 and RWY 31.
- After the prescribed altitudes omnidirectional departure to the destinations routes.
CARTA NOVA
01 JUL 2007
ENANA


IAC
FNGI
AERODROME ELEV 3657'
THR RWY 13 ELEV 3645'
TWR 118.3
ANGOLA
ONDJIVA/11 DE NOVEMBRO
NDB RWY 13
Bearings are magnetic
Altitudes elevations and
heights in feet.
10 NM
9.2°W 2007
2 min 30 Seg
325°
127°
145°
3558'
3903'
GI
327
MSA
GI
25 NM
5000'
TA 6.000'
CLIMB TO 6000' ON 127° TRACK
AND RETURN TO NDB GI.
GI
325°
6000'
5000'
127°
127°
OCA/H
THR Elev. 3645'
NM
5
0
OCA (H)
CAT
A
B
C
D
Straight -in
4060 (420)
Circling
4170 (520)
4270 (620)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
650
11 JUL 07
CARTA NOVA
ENANA
RWY 13 NDB


IAC
FNGI
AERODROME ELEV 3657'
THR RWY 31 ELEV 3651'
TWR 118.7
ANGOLA
ONDJIVA/11 DE NOVEMBRO
NDB RWY 31
Bearings are magnetic
Altitudes elevations and
heights in feet.
10 NM
9.2° W 2007
GI
327
301°
139°
3558'
319°
301°
139°
2 min 30 Seg
GI
MSA
25 NM
5000'
TA 6.000'
CLIMB TO 6000' ON 301° TRACK
AND RETURN TO NDB GI.
GI
6000'
139°
5000'
301°
301°
OCA/H
THR Elev. 3651'
NM
0
5
OCA (H)
CAT
A
B
C
D
Straight -in
4170 (520)
Circling
4170 (520)
4270 (620)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
650
11 JUL 07
CARTA NOVA
ENANA
RWY 31 NDB

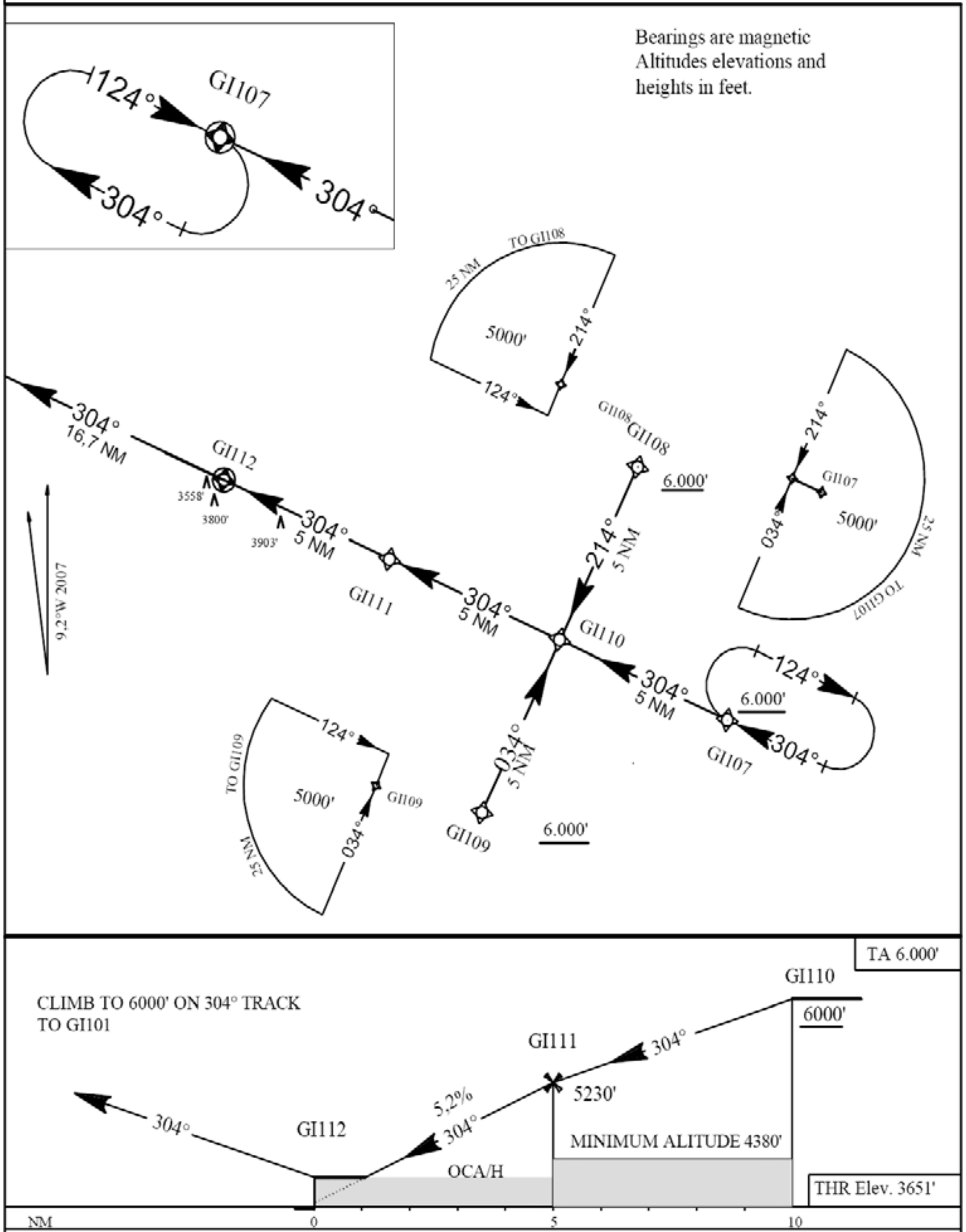

IAC
FNGI
AERODROME ELEV 3657'
THR RWY 13 ELEV 3645'
TWR 118.7
ANGOLA
ONDJIVA/11 DE NOVEMBRO
RNAV (GNSS) RWY 13
Bearings are magnetic
Altitudes elevations and
heights in feet.
9.2°W 2007
TO GI101
25 NM
5000'
214°
GI101
034°
GI103
6.000'
214°
5 NM
GI103
214°
25 NM
TO GI103
5000'
304°
GI101
124°
6.000'
304°
124°
5 NM
GI104
124°
5 NM
GI105
034°
5 NM
124°
5 NM
GI106
6.000'
GI102
3558'
3800'
3903'
124°
16,7 NM
GI102
304°
034°
5000'
25 NM TO GI102
124°
124°
304°
GI107
TA 6.000'
GI104
6000'
124°
GI105
5230'
5,2%
124°
GI106
124°
Minimum Altitude 4380'
OCA/H
CLIMB TO 6000' ON 124° TRACK
TO GI107
THR ELEV. 3645'
NM
10
5
0
OCA (H) (ft)
CAT
A
B
C
D
Straight -in
4010(370)
Circling
6170 (620)
6270 (620)
Distance to THR
4
3
2
Altitude (height)
4990(1320)
4650(1000)
4330(690)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
370
530
670
850
1010
14 JUL 07
CARTA NOVA
ENANA
RNAV (GNSS) RWY 13

IAC
FNGI

AERODROME ELEV 3657'
THR RWY 31 ELEV 3651'

TWR 118.7

ANGOLA
ONDJIVA/11 DE NOVEMBRO
RNAV (GNSS) RWY 31



	OCA (H) (ft)			
CAT	A	B	C	D
Straight -in	4130(480)			
Circling	4170 (520)		4270 (620)	

Distance to THR	4		3		2	
Altitude (height)	4970(1270)		4650(950)		4340(640)	
Speed (kt)	70	100	130		160	190
Rate (ft/min)	370	530	670		850	1010

14 JUL 07 CARTA NOVA ENANA RNAV (GNSS)RWY 31

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1	LOCATION INDICATOR	AERODROME NAME	
	FNUB	LUBANGO/Mukanka	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	14º55'28''S E013º34'18'
2	Direction and distance from city	E/8.5 KM from LUBANGO
3	Elevation/Reference temperature	1753M/5751FT/25.0 ºC
4	Magnetic variation/Annual change	8.5ºW (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	NIL
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	HJ
9	Handling	NIL
10	Security	HJ
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	JET A1/NIL
3	Fuelling capacity	30 000 Litres
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS checkpoints	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	RWY CL, TWY CL, TDZ MARKINGS
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
RWY 28	Mast at Threshold 28 1746.2 M	14º 55’23’’S 013º35’07’’E	Mast at Christo Rei 2181.5 M	14º56’26’’S 013º30’48’’E	
	Old NDB Mast 1778.5 M	14º55’40’’S 013º34’20’’E			

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	TWY (Width)	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6	7
10	268.17	2900 X 45 m	39/F/B/X/U	14º 55’ 31” S 013º 33’ 41“ E	1759.11	10
28	268.17	2900 X 45 m	39/F/B/X/U	14º 55’ 28” S 013º 35’ 18” E	1735.81	28

Designation RWY NR	Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
1	8	9	10	11	12	13
10	- 0.80%	NIL	NIL	NIL	NIL	10
28	0.80%	NIL	NIL	NIL	NIL	28

Designation RWY NR	Remarks
1	14
10/28	HAZARDS- PEOPLE AND ANIMALS ALONG THE RWY

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	2	3	4	5	6
10	2900	2900	2954	2900	375 X 110 m
28	2900	2900	2968	2900	

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
10	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
28	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	**Call sign**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	2	3	4	5	6	7
AFIS	Lubango Tower	118.9 MHZ	NIL	A3	HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	**ID**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**	**7**
NDB	UB	335.0 KHZ	14º55’26’’S 013º35’52’’E	NIL	H24	NIL

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact AFIS
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES	
	NIL	

23	ADDITIONAL INFORMATION
NIL	

24	CHARTS RELATED TO LUBANGO/ Mukanka AERODROME	
	Charts	Pages
	NIL	

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1	LOCATION INDICATOR	AERODROME NAME	
	FNHU	HUAMBO/Albano Machado	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	12°48'00"S 015°45'00"E
2	Direction and distance from city	SE/5 KM from HUAMBO
3	Elevation/Reference temperature	1355M /4446FT / 23.0 °C
4	Magnetic variation/Annual change	6.4°W (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	HJ
4	AIS Briefing office	HJ
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	NIL
10	Security	NIL
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	NIL/NIL
3	Fuelling capacity	NIL
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: NIL
3	ACL location/Elevation	NIL
4	VOR/INS checkpoints	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
See Aerodrome Obstacle Chart					

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	TWY (Width)	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6	7
11		100.52	2673 x 45	ASPH	12°48'24''S 015°44'54''E	1704.46
29		280.50	2673 x 45	ASPH	12°48'40''S 015°46'22''E	1696.76

Designation RWY Nº	Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
1	8	9	10	11	12	13
11	-0.29%	NIL	NIL	NIL	NIL	NIL
29	0.29%	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	**2**	**3**	**4**	**5**	**6**
11	2600	2600	2600	2600	NIL
29	2600	2600	2600	2600	NIL

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
11	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
29	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	**Call sign**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	2	3	4	5	6	7
AFIS	HUAMBO Tower	118.3 MHZ	NIL	A3	HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	**ID**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**	**7**
VOR/DME	VHU	113.3 MHZ CH 80X	12°48'31''S 015°44'58''E	NIL	H24	100 NM
NDB	HU	402.0 khz	12°48'00''S 015°42'41''E	NIL	H24	60 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact AFIS
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE ''HU'' NDB RWY 11 RWY 19	
1.1	General Information	
	1) Transition Level	By ATC
	2) Transition Altitude	10000 FT
	3) Minimum Sector Altitude	
	a) Within 25 NM of VHU – **West Sector:** – **East Sector:**	 9500 FT 8500 FT
	4) Aerodrome Elevation	5592 FT
	5) Threshold Elevation	5592 FT
	6) Threshold RWY 29	5567 FT
1.2	Navigation	See Chart
1.3	En route Segment	Aircraft arrives overhead "VHU" VOR/DME at minimum enroute flight level and shutlle on holding pattern at minima holding altitude 9000 Feet QNH.
1.4	Holding On ``HU´´ NDB	See Chart
1.5	Initial Segment	See Chart
1.6	Final Approach Segment	See Chart
1.7	Missed Approach Segment	See Chart

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO HUAMBO/Albano Machado AERODROME

	Charts	Pages
	HUAMBO RWY 29 VOR CAT CD	AD 2 FNHU 2-1
	HUAMBO RWY 11 VOR/DME CAT ABCD	AD 2 FNHU 2-2
	HUAMBO RWY 29 VOR/DME CAT ABCD	AD 2 FNHU 2-3
	HUAMBO RWY 11 GNSS CAT ABCD	AD 2 FNHU 2-4
	HUAMBO RWY 29 GNSS CAT ABCD	AD 2 FNHU 2-5

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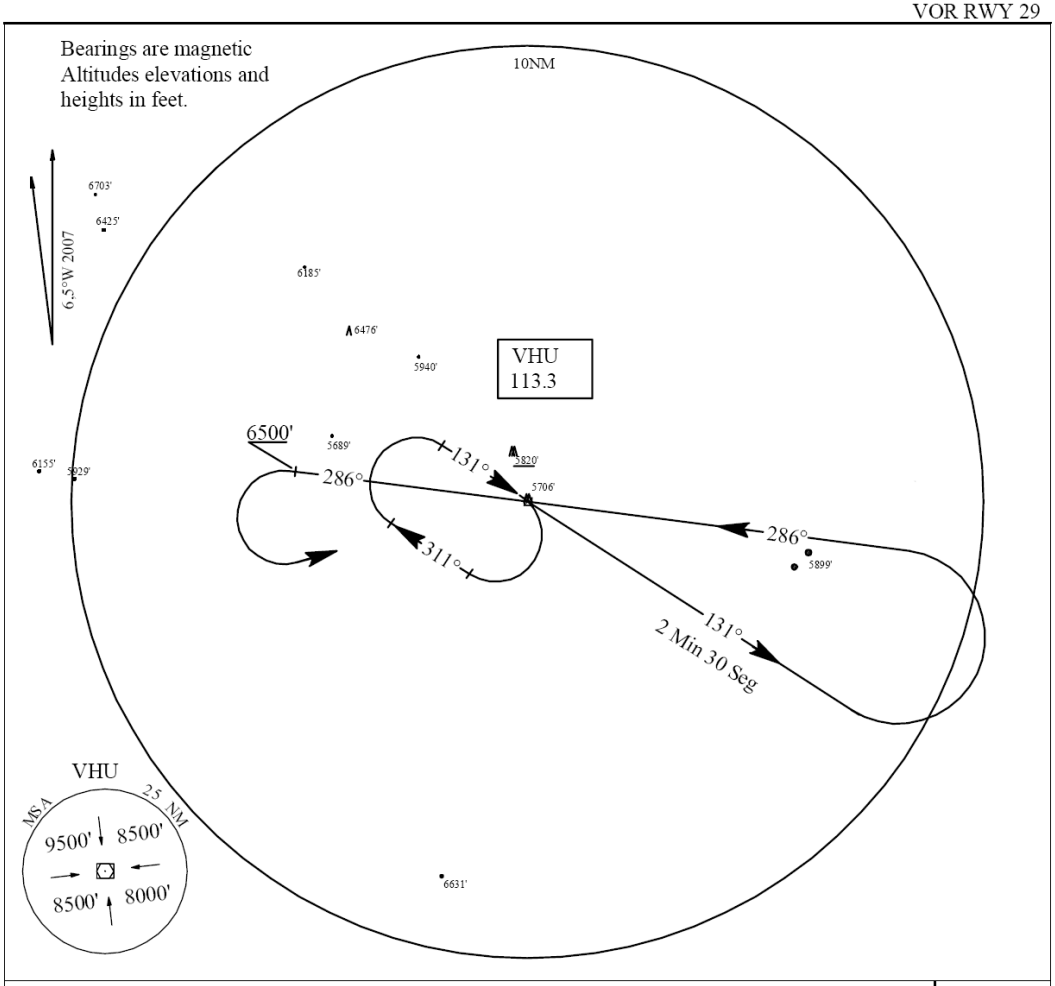
IAC
FNHU

AERODROME ELEV 5592'
THR RWY 29 ELEV 5567'

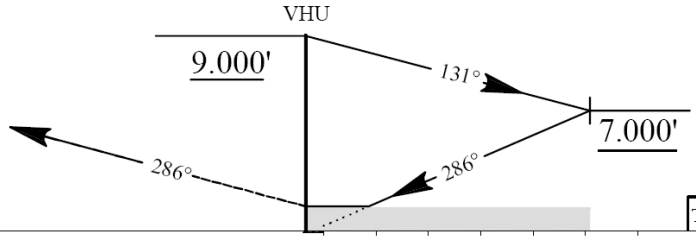
TWR 118.3

ANGOLA
HUAMBO/ALBANO MACHADO
VOR RWY 29



Climb to 6.500' on R-286° then turn left climbing to 9.000' to hold on VOR.

TA 10.000'

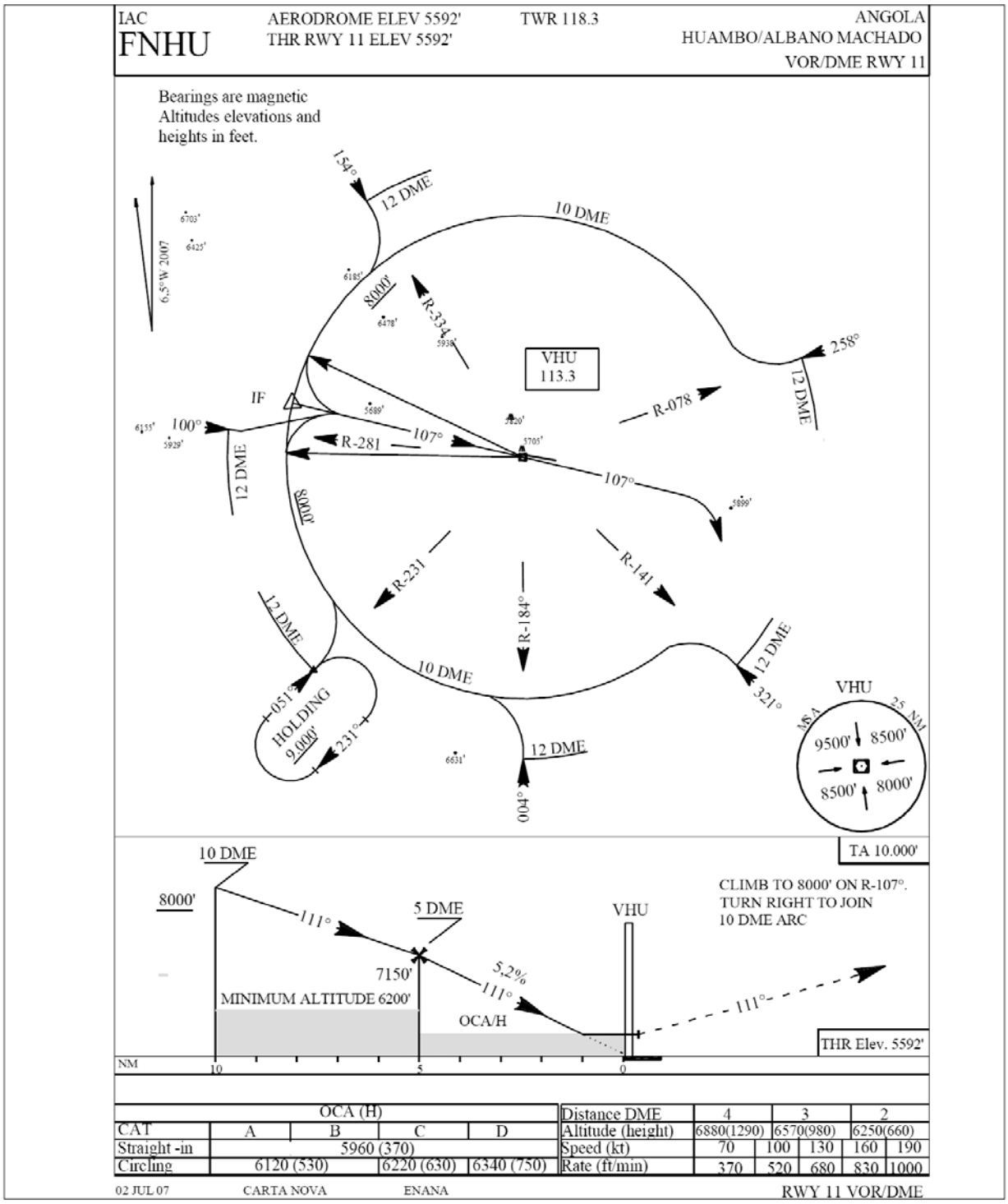


	OCA (H) (ft)	
CAT	C	D
Straight -in	6300 (730)	
Circling	6220 (630)	6340 (740)

Speed (kt)	160	180	200	220	240
Rate (ft/min)	800'/Min				

02 JUL 07 CARTA NOVA ENANA

RWY 29 VOR



OCA (H)				
CAT	A	B	C	D
Straight -in	5960 (370)			
Circling	6120 (530)		6220 (630)	6340 (750)

Distance DME	4	3	2		
Altitude (height)	6880(1290)	6570(980)	6250(660)		
Speed (kt)	70	100	130	160	190
Rate (ft/min)	370	520	680	830	1000

02 JUL 07 CARTA NOVA ENANA RWY 11 VOR/DME

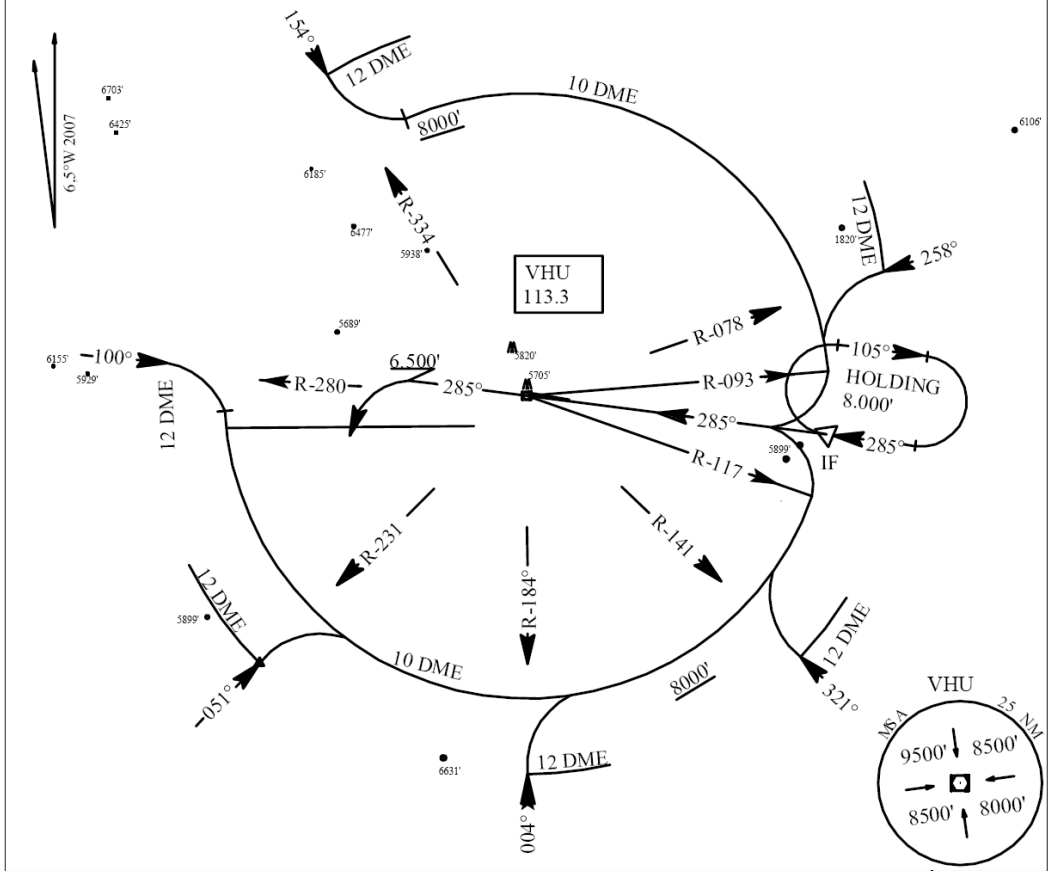
IAC
FNHU

AERODROME ELEV 5592'
THR RWY 29 ELEV 5567'

TWR 118.3

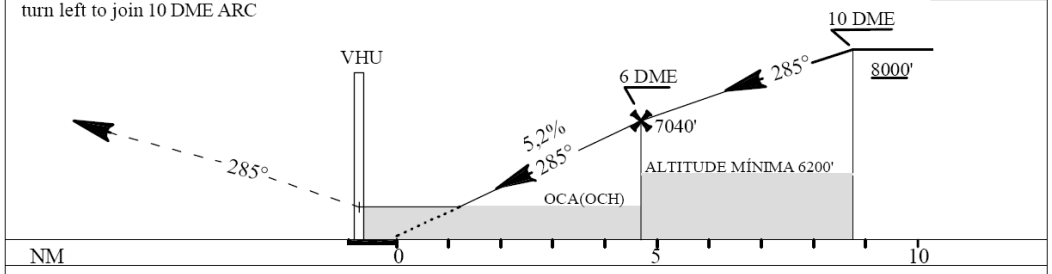
ANGOLA
HUAMBO/ALBANO MACHADO
VOR-DME RWY 29

Bearings are magnetic
Altitudes elevations and heights in feet.



TA 10.000'

Climb to 8000' on R-285°. At 6.500' turn left to join 10 DME ARC



OCA (H)				
CAT	A	B	C	D
Straight -in	5960 (390)			
Circling	6120 (550)		6220 (630)	6340 (740)

Distance DME	5	4		3	
Altitude (height)	6770(1210)	6460(840)		6140(570)	
Speed (kt)	70	100	130	160	190
Rate (ft/min)	370	520	680	830	1000

02 JUL 07 CARTA NOVA ENANA

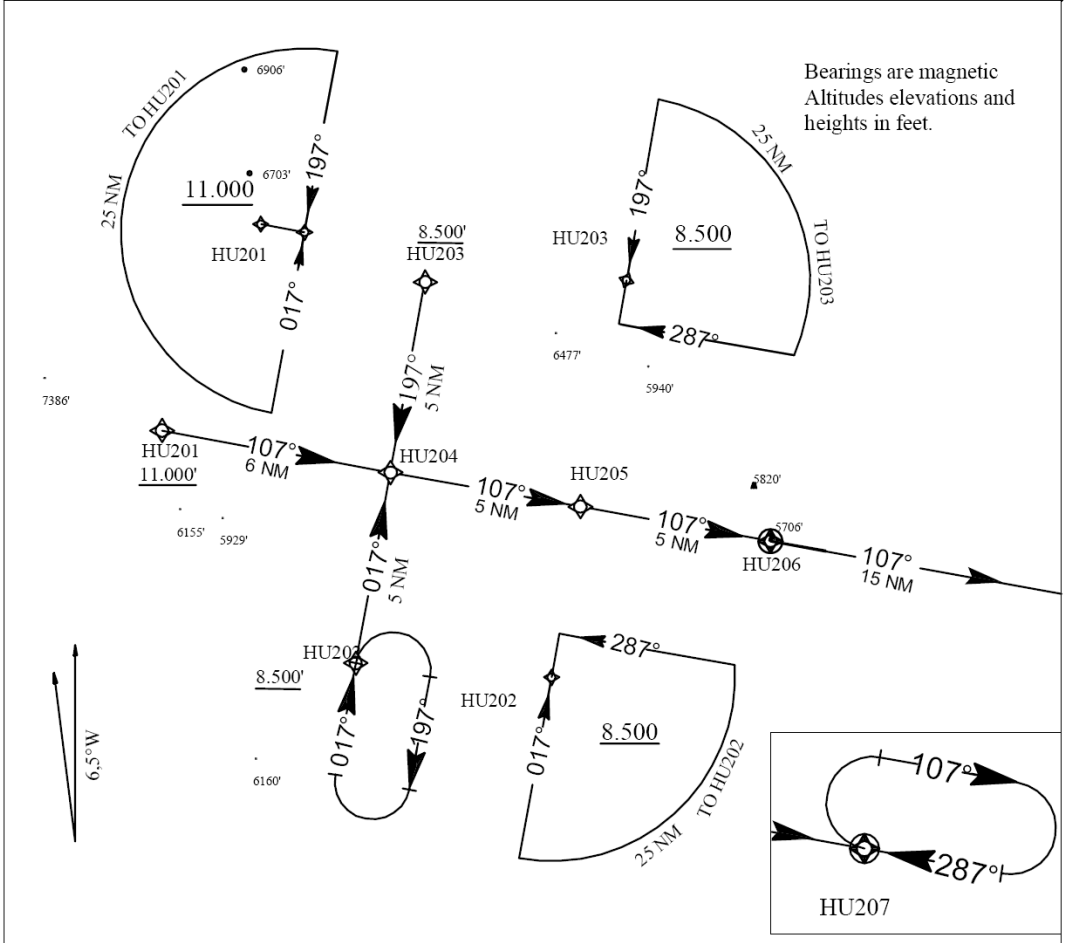
RWY 29 VOR/DME

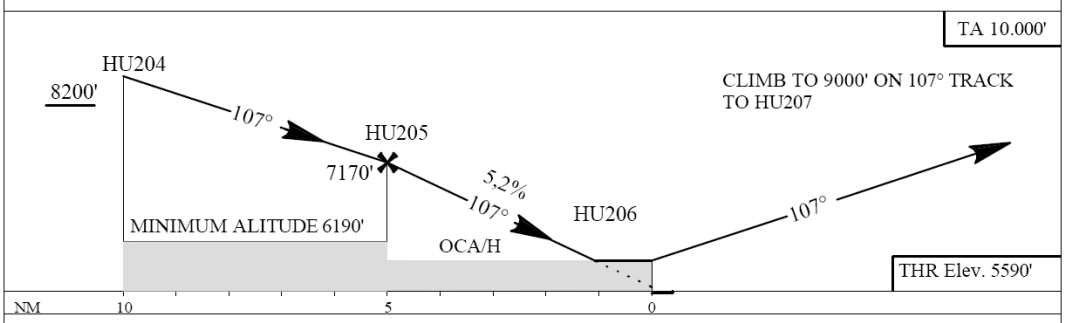
IAC
FNHU

AERODROME ELEV 5592'
THR RWY 11 ELEV 5590'

TWR 118.3

ANGOLA
HUAMBO/ALBANO MACHADO
RNAV (GNSS) RWY 11





	OCA (H) (ft)			
CAT	A	B	C	D
Straight -in	5960 (370)			
Circling	6120 (530)		6220 (630)	6340 (750)

Distance to THR	4	3	2		
Altitude (height)	6910(1270)	6590(950)	6280(640)		
Speed (kt)	70	100	130	160	190
Rate (ft/min)	370	520	680	840	1000

19 JUN 07 CARTA NOVA ENANA

RNAV (GNSS) RWY 11

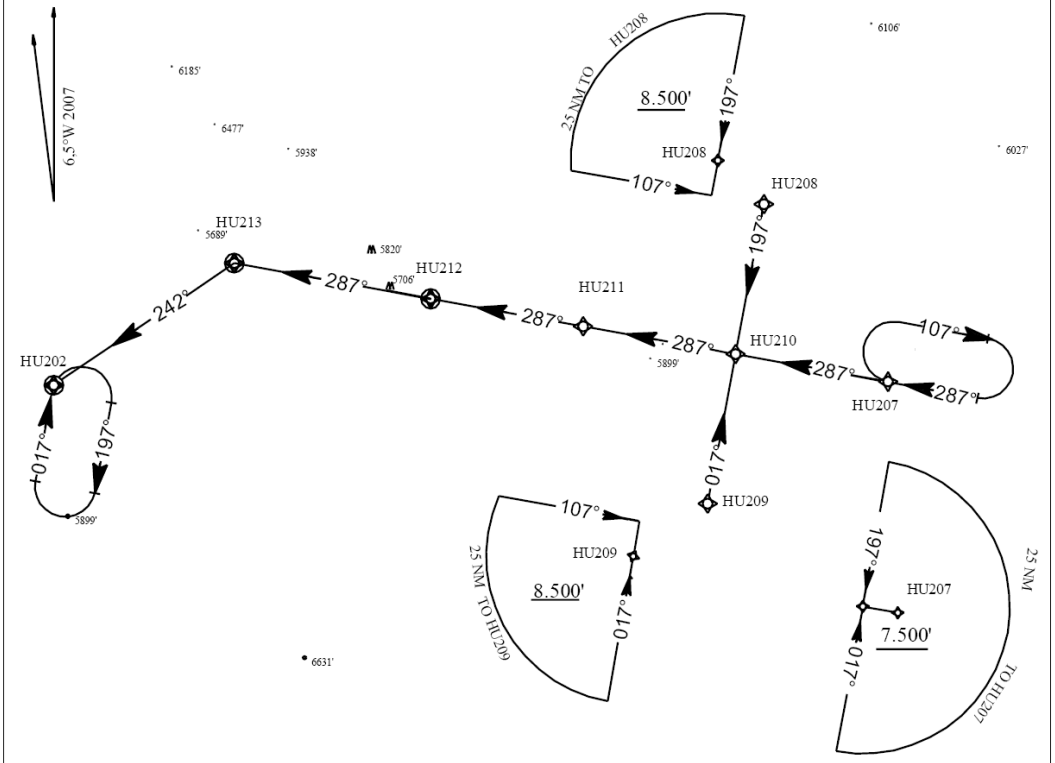
IAC
FNHU

AERODROME ELEV 5592'
THR RWY 29 ELEV 5567'

TWR 118.3

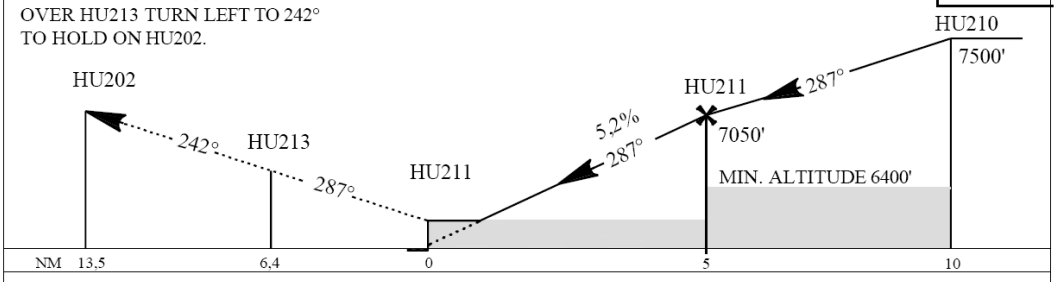
ANGOLA
HUAMBO/ALBANO MACHADO
RNAV (GNSS) RWY 29

Bearings are magnetic
Altitudes elevations and
heights in feet.



CLIMB TO 9000' ON 287° TRACK.
OVER HU213 TURN LEFT TO 242°
TO HOLD ON HU202.

TA 10.000'



OCA (H)				
CAT	A	B	C	D
Straight -in	5960 (390)			
Circling	6120 (530)		6220 (630)	6340 (740)

Distance to THR	4	3		2	
Altitude (height)	6780(1220)	6470(900)		6150(590)	
Speed (kt)	70	100	130	160	190
Rate (ft/min)	370	520	680	830	1000

02 JUL 07 CARTA NOVA ENANA

RNAV (GNSS)RWY 29

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1	LOCATION INDICATOR	AERODROME NAME	
	FNLU	LUANDA/4 de Fevereiro	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	08°51'20"S 013°14'02"E
2	Direction and distance from city	S/4.5 KM from LUANDA
3	Elevation/Reference temperature	73M /238FT / 28.3 °C
4	Magnetic variation/Annual change	6.2°W (2008)
5	AD Administration, address, Telephone, telefax, AFS	See GEN 1.1
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	H24
2	Customs and Immigration	H24
3	Health and sanitation	H24
4	AIS Briefing office	H24
5	ARO Reporting office	H24
6	Met Briefing office	H24
7	ATS	H24
8	Fuelling	H24
9	Handling	H24
10	Security	H24
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/Oil types	JET A1,AVGAS/NIL
3	Fuelling capacity	50000 Litres
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	Available by arragement with Angolan Airline (TAAG) Hangar
6	Repair facilities for visiting aircraft	Major and minor repairs can be undertaken by Angolan Airline (TAAG) maitenance hangar with prior arragement and instrumentation available for B-727, B-737, B-747
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	H24
3	Transportation	Buses and taxis
4	Medical facilities	One motor ambulance Hospital in city
5	Bank and Post office	HJ
6	Touristic office	HJ
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	A9 (ICAO)
2	Rescue equipment	Adequate rescue and fire fighting vehicles, equipment and personal provided.
3	Capability for removal of disabled aircraft	NIL
4	Remarks	Service provided H24.

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS checkpoints	VOR: Holding bay TWY B/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
	Airport Light 1 103.6 M	08º50'48''S 013º14'20''E	Receiver 2 110.0 M	08º51'42''S 013º14'52''E	
		Airport Light 2 103.8 M	08º50'56''S 013º14'00''E	Receiver 1 111.2 M	
			Water TWR 113.4 M	08º51'17''S 013º15'15''E	
			Church 111.5 M	08º49'49''S 013º15'23''E	
			Military Mast 122.1 M	08º50'26''S 013º14'27''E	
			Stadium Light 1 126.2 M	08º49'39''S 013º15'17''E	
			Stadium Light 2 126.1 M	08º49'42''S 013º15'22''E	
			TV Mast 193.5 M	08º48'31''S 013º15'07''E	
			Telecom TWRt 133.8 M	08º49'36''S 013º14'53''E	
			Angola Telecom 129.6 M	08º49'36''S 013º14'53''E	
			Sonangol TWR 111.7 M	08º49'27''S 013º13'26''E	
			Cassenda/ Building TWR 118.3 M	08º50'40''S 013º13'38''E	
			Telecom TWR 106.6 M	08º53'37''S 013º12'51''E	
			UN Radio Mast 1 05.4 M	08º53'56''S 013º12'24''E	
			UN Radio Mast 2 105.0 M	08º53'53''S 013º12'22''E	
			Catholic Radio Mast 156.3 M	08º50'16''S 013º18'01''E	
			Water TWR 116.2 M	08º49'17''S 013º16'53''E	
			Ghost TWR 120.9 M	08°48’52’’S 013°18’20’’E	
			Radio Angola Mast1 160.5 M	08°51’07’’S 013°19’01’’E	
			Radio Angola Mast1 140.2 M	08°51’05’’S 013°18’49’’E	
			Radio Angola Mast1 145.3 M	08°51’25’’S 013°18’54’’E	
			Musoleum 126.5 M	08°49’25’’S 013°13’09’’E	

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11	METEOROLOGICAL INFORMATION

1	Associated MET office	Luanda International Airport MWO
2	Hours of service	H24
3	Office responsible of TAF preparation/Period of validity	MET H24
4	Type of landing forecast/Interval of issuance	TECN 30 MIN
5	Briefing and consultation provided	P
6	Flight documentation/Language used	ENG/POR
7	Chart and other information available for briefing or consultation	H24
8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	H24
10	Climatological information and additional information	H24

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	**True & MAG Bearing**	**Dimension of RWY (M)**	**Strength (PCN) and surface of RWY and SWY**	**THR coordinates**	**THR Elevation and Highest elevation of DTZ of precision APP RWY**
1	2	3	4	5	6
05	46.59	3700 x 45	ASPH	08°52'37''S 013°12'50''E	71.61
23	226.59 T	3700 x 45	ASPH	08°51'14''S 013°14'18''E	70.65
07	67.54	2500 x 60	ASPH	08°51'20''S 013°13'32''E	73.33
25	247.54	2500 x 60	ASPH	08°50'49''S 013°14'48''E	68.02

Slope of RWY-SWY	**SWY Dimention (M)**	**CWY Dimention (M)**	**Strip dimensions (M)**	**OFZ**	**Remarks**
7	8	9	10	11	12
0.03%	NIL	NIL	NIL	NIL	NIL
0.03%	NIL	NIL	NIL	NIL	NIL
0.10%	NIL	NIL	NIL	NIL	NIL
0.10%	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	**TORA (M)**	**TODA (M)**	**ASDA (M)**	**LDA (M)**	**APRONS**
1	**2**	**3**	**4**	**5**	**6**
05	3700	3700	3700	3700	NIL
23	3700	3700	3700	3700	NIL
07	2500	2500	2500	2500	NIL
25	2500	2500	2500	2500	N

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
05	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
23	CAT I LIH	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
07	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
25	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	Coordinate ABN: Alternate Green and White Orario: H24 NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Airport Hangar number 1 Anemometer: NIL
3	TWY edge and centre line lighting	Available
4	Secondary power supply/Switch over time	15 Seconds
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
CTR LUANDA CTR 08°50'43''S 013°14'51''E 08°50'43''S013°14'51''E	GND - 3000FT	[C]	Luanda Tower (English , Portuguese)	914FT (3000 M) MSL	NIL

18	ATS COMMUNICATION FACILITIES

Service	Call sign	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
APP	Luanda Approach	119.1 MHZ	NIL	A3	H24	NI
ACC	Luanda Control	118.5 MHZ	NIL	A3	H24	NIL
GND	Luanda GND Control	121.9 MHZ	NIL	A3	H24	NIL
TWR	Luanda Tower	118.1 MHZ	NIL	A3	H24	NIL

19 RADIO NAVIGATION AND LANDING AIDS

Type	ID	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
GP 23		335.0 MHZ	08°52'27''S 013°14'09''E	A2	H24	NIL
ILS RWY 23 LLZ CAT I	LD	110.3 KHZ	08°52'42''S 013°12'43''E	A2	H24	NIL
VOR/DME	VNA	112.7 MHZ	08°50'43''S 013°14'51''E	NIL	H24	150 NM
VOR/DME	VNA	CH 74X	08°50'43''S 013°14'51''E	NIL	H24	150 NM
NDB	LU	258.0 KHZ	08°47'33''S 013°18'14''E	NIL	H24	250 NM
NDB	CL	358.0 KHZ	08°50'06''S 013°15'30''E	NIL	H24	100 NM

20 LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact Luanda Ground
3	Removal of disabled aircraft from runways	NIL

21 NOISE ABATEMENT PROCEDURES

1	General	NIL

22 NOISE ABATEMENT PROCEDURES

1	**HOLDING AND INSTRUMENT PROCEDURE ''VNA'' VOR/DME RWY 23**	
1.1	General Information	
	1. Transition Level	By ATC
	2. Transition Altitude	3000 FT
	3. Minimum Sector Altitude	
	a) Within 25 NM of ''VNA'' VOR: (all sector)	2500 FT
	4. Aerodrome Elevation	243 FT
	5. Threshold Elevation RWY 23 **6. Threshold Elevation RWY 05**	233 FT 236 FT
1.2	Navigation	NDB "LU" 258 KHZ; VOR/DME ''VNA'' 112.7 Mhz
1.3	En route Segment	Aircraft arrive at minimum enroute fligth levels to intercept 12 DME ARC from "VNA" VOR/DME.
1.4	Holding On "MANGO" (Interception Fix on R053º/10DME From "VNA" VOR/DME)	See Chart
1.5	Initial Segment	See Chart
1.6	Intermediate Segment	See Chart
1.7	Final Approach Segment	See Chart
1.8	Missed Approach Segment	See Chart

2	**HOLDING AND INSTRUMENT PROCEDURE "VNA" ILS/VOR/ DME RWY 23**	See Chart
2.1	General Information	
	1. Transition Level	By ATC
	2. Transition Altitude	3000 FT
	3. Minimum Sector Altitude	
	a) Within 25 NM of ''VNA'' VOR/DME: (all sector)	2500 FT
	4. Aerodrome Elevation	238 FT
	5. Threshold Elevation RWY 23 ***** Displaced Threshold RWY 23 *	232 FT
2.2	Navigation	VOR/DME ''VNA'' 112.7 Mhz
2.3	En route Segment	Aircraft arrive overhead "MANGO" (IAF) " 10 DME VNA/VOR and 11 DME ILD at minimum enroute levels and shutle to 3000Ft.
2.4	Holding On "MANGO" (IAF)	See Chart
2.5	Initial Segment	See Chart
2.6	Intermediate Segment	See Chart
2.7	Final Approach Segment	See Chart
2.8	Missed Approach Segment	See Chart
3	**HOLDING AND INSTRUMENT PROCEDURE "LU" ILS/NDB RWY 23**	See Chart
3.1	General Information	
	1. Transition Level	By ATC
	2. Transition Altitude	3000 FT
	3. Minimum Sector Altitude	
	a. Within 25 NM of ''LU'' NDB: (all sector)	2500 FT
	4. Aerodrome Elevation	238 FT
	5. Threshold Elevation ***** Displaced Threshold RWY 23 *	232 FT
3.2	Navigation	NDB "LU" 258 KHZ
3.3	En route Segment	Aircraft arrive overhead "LU" NDB at minimum enroute levels and shutlle holding pattern to transition altitude 3000Ft.
3.4	Holding On "MANGO" (IAF)	See Chart
3.5	Initial Segment	See Chart
3.6	Intermediate Segment	See Chart
3.7	Final Approach Segment	See Chart
3.8	Missed Approach Segment	See Chart
4	**HOLDING AND INSTRUMENT PROCEDURE "VNA" VOR/DME RWY 05**	See Chart
4.1	General Information	
	1. Transition Level	By ATC
	2. Transition Altitude	3000 FT
	3. Minimum Sector Altitude	
	a) Within 25 NM of ''LU'' NDB: (all sector)	2500 FT
	4. Aerodrome Elevation	243 FT
	5. Threshold Elevation RWY 23 **6. Threshold Elevation RWY 05**	233 FT 236 FT
4.2	Navigation	VOR/DME ''VNA'' 112.7 Mhz; NDB "LU" 258 KHZ

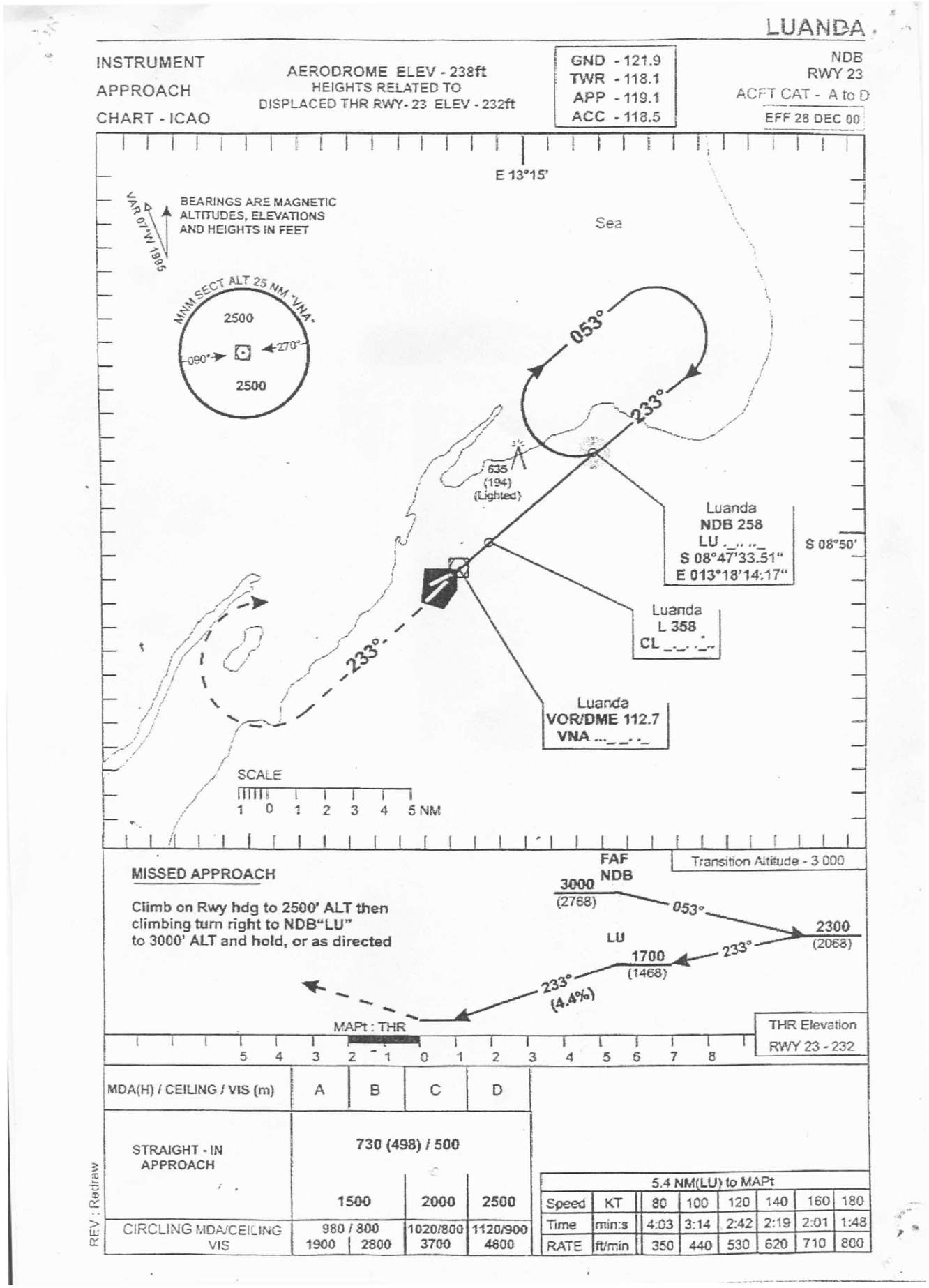
4.3	En route Segment	Aircraft arrive overhead "VNA" VOR/DME at the minimum enroute flight levels and shuttle on holding pattern to transition altitude 3000Ft QNH.
4.4	Holding on "LU NDB"	See Chart
4.5	Initial Segment	See Chart
4.6	Intermediate Segment	See Chart
4.7	Final Approach Segment	See Chart
4.8	Missed Approach Segment	See Chart

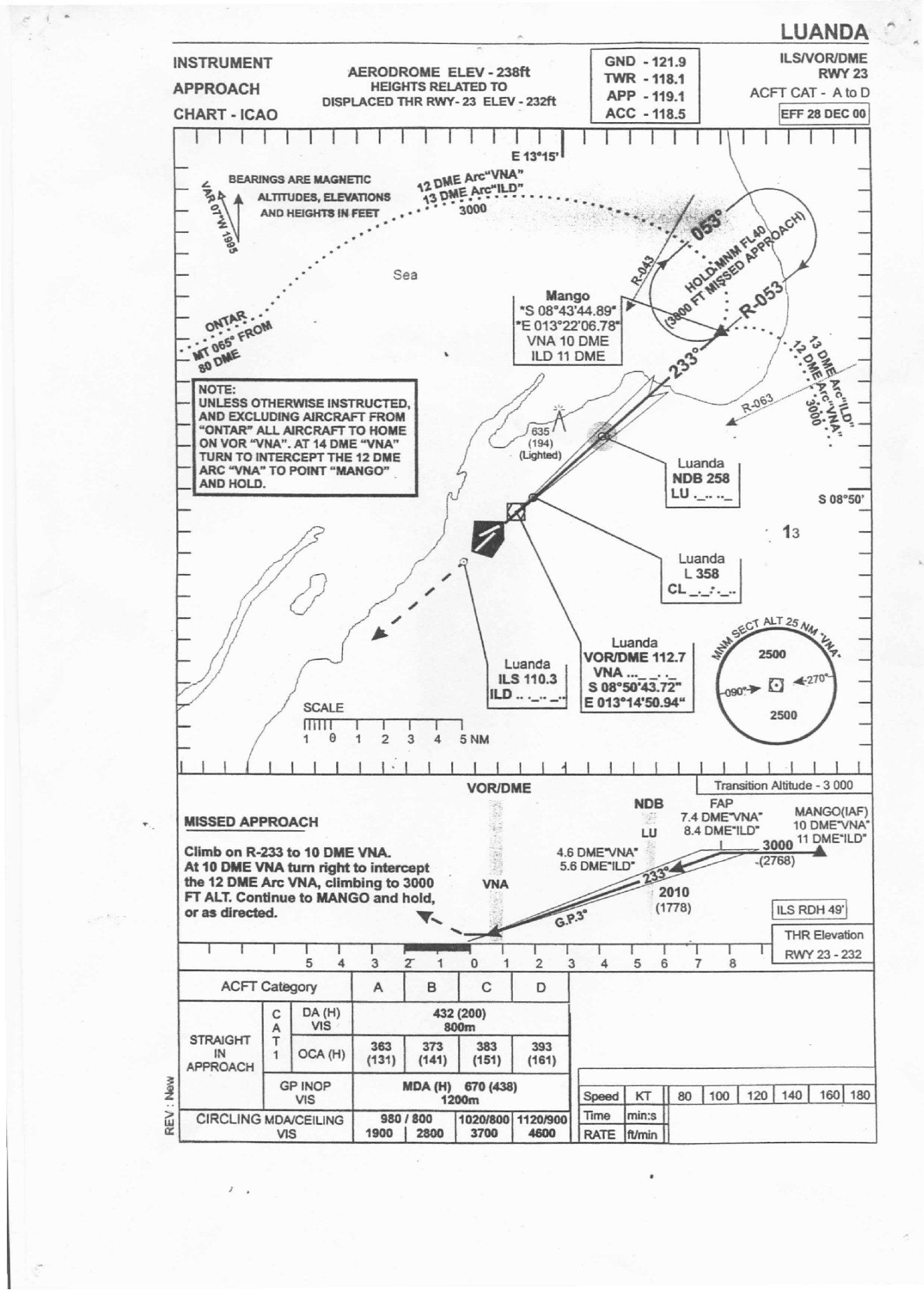
23	ADDITIONAL INFORMATION

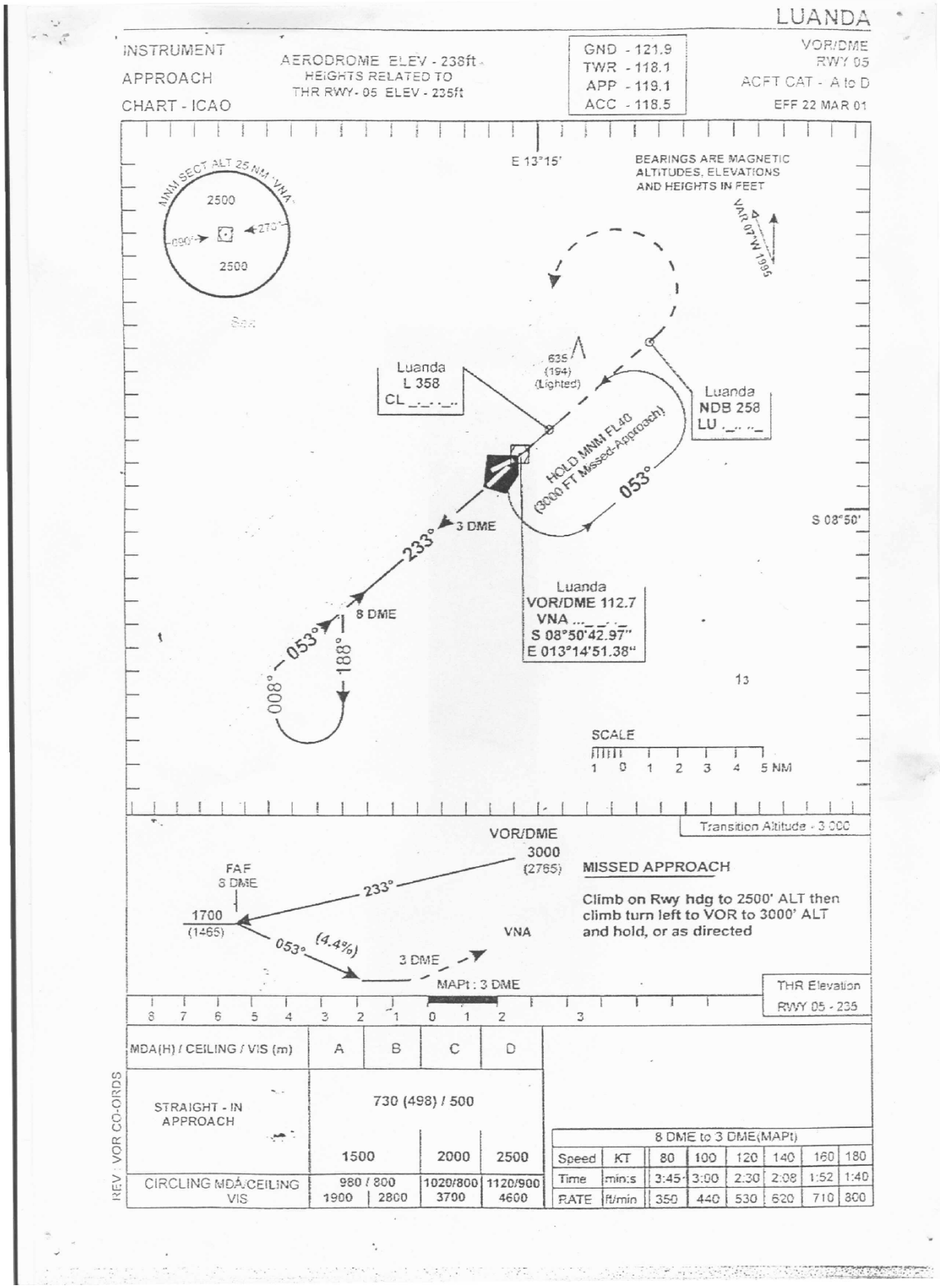
NIL

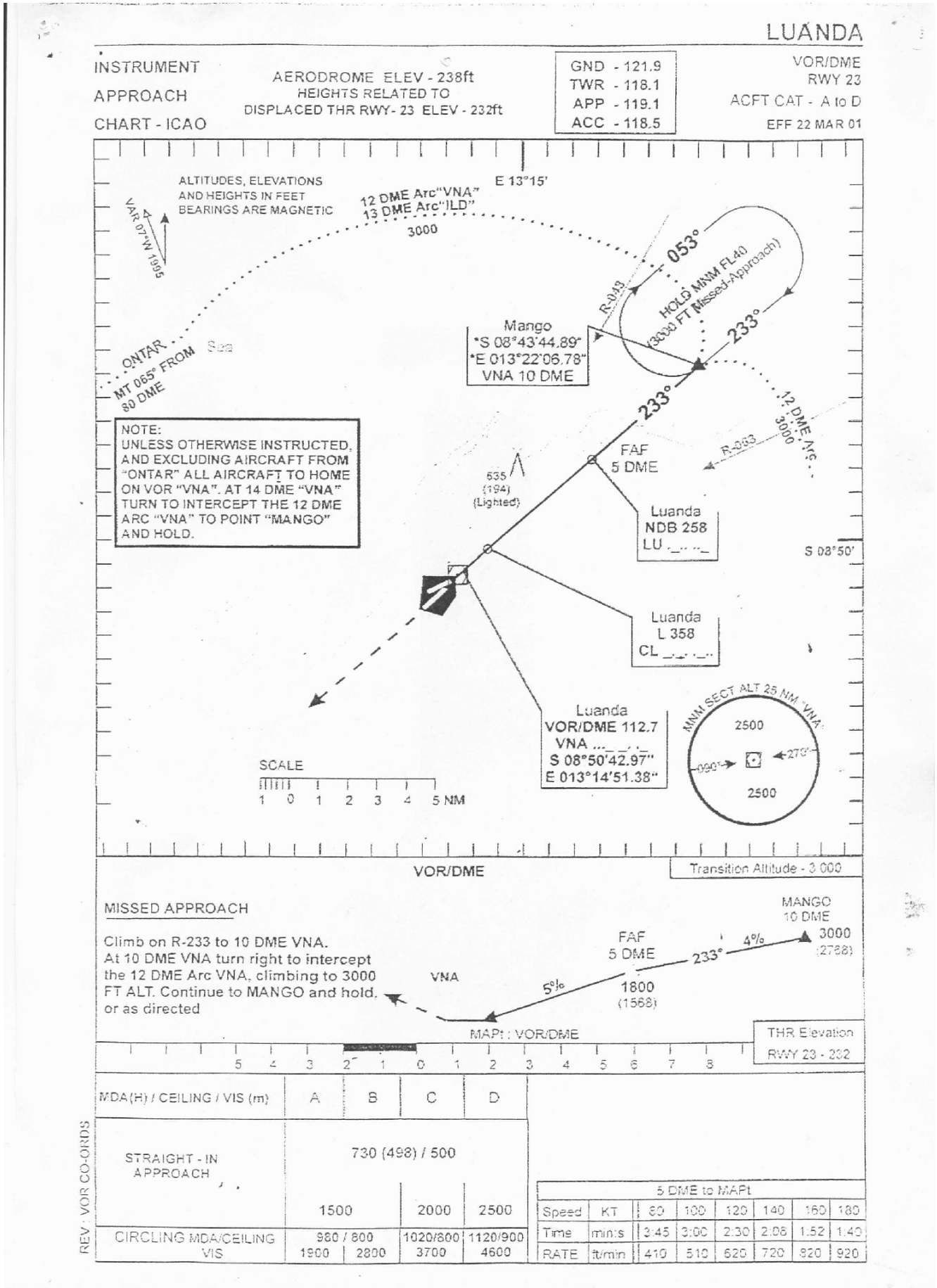
24	CHARTS RELATED TO LUANDA/4 DE FEVEREIRO AERODROME

	Charts	Pages
	LUANDA NDB RWY 23	AD 2 FNLU 2-1
	HUAMBO VOR/DME/ILS RWY 23	AD 2 FNLU 2-2
	LUANDA VOR/DME VOR/DME RWY 05	AD 2 FNLU 2-3
	LUANDA VOR/DME RWY 23	AD 2 FNLU 2-4
	LUANDA RNAV GNSS APP RWY 23	AD 2 FNLU 2-5
	LUANDA RNAV GNSS SID RWY 05	AD 2 FNLU 2-6
	LUANDA RNAV GNSS SID RWY 23_1	AD 2 FNLU 2-7
	LUANDA RNAV GNSS SID RWY 23_2	AD 2 FNLU 2-8
	LUANDA RNAV GNSS SID RWY 23_3	AD 2 FNLU 2-9
	LUANDA RNAV GNSS STAR RWY 23	AD 2 FNLU 2-10


LUANDA
INSTRUMENT
APPROACH
CHART - ICAO
AERODROME ELEV - 238ft
HEIGHTS RELATED TO
DISPLACED THR RWY- 23 ELEV - 232ft
GND - 121.9
TWR - 118.1
APP - 119.1
ACC - 118.5
NDB
RWY 23
ACFT CAT - A to D
EFF 28 DEC 00
E 13°15'
BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS
AND HEIGHTS IN FEET
VAR 07°W 1995
Sea
MNM SECT ALT 25 NM "VNA"
2500
090°
270°
2500
053°
233°
635
(194)
(Lighted)
Luanda
NDB 258
LU
S 08°47'33.51"
E 013°18'14.17"
S 08°50'
Luanda
L 358
CL
Luanda
VOR/DME 112.7
VNA
233°
SCALE
1 0 1 2 3 4 5 NM
MISSED APPROACH
Climb on Rwy hdg to 2500' ALT then
climbing turn right to NDB"LU"
to 3000' ALT and hold, or as directed
FAF
NDB
3000
(2768)
053°
2300
(2068)
LU
1700
(1468)
233°
233°
(4.4%)
MAPt : THR
Transition Altitude - 3 000
THR Elevation
RWY 23 - 232
5 4 3 2 1 0 1 2 3 4 5 6 7 8
MDA(H) / CEILING / VIS (m)
A
B
C
D
STRAIGHT - IN
APPROACH
730 (498) / 500
1500
2000
2500
CIRCLING MDA/CEILING
VIS
980 / 800
1900
2800
1020/800
3700
1120/900
4800
5.4 NM(LU) to MAPt
Speed KT 80 100 120 140 160 180
Time min:s 4:03 3:14 2:42 2:19 2:01 1:48
RATE ft/min 350 440 530 620 710 800
REV : Redraw


LUANDA
INSTRUMENT APPROACH CHART - ICAO
AERODROME ELEV - 238ft
HEIGHTS RELATED TO DISPLACED THR RWY- 23 ELEV - 232ft
GND - 121.9
TWR - 118.1
APP - 119.1
ACC - 118.5
ILS/VOR/DME RWY 23
ACFT CAT - A to D
EFF 28 DEC 00
E 13°15'
BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS AND HEIGHTS IN FEET
VAR 0°W 1995
12 DME Arc"VNA"
13 DME Arc"ILD"
3000
Sea
ONTAR
MT 065° FROM 80 DME
Mango
°S 08°43'44.89"
°E 013°22'06.78"
VNA 10 DME
ILD 11 DME
053°
R-043
HOLD:MNM FL40 (3800 FT MISSED APPROACH)
R-053
233°
R-063
13 DME Arc"ILD"
12 DME Arc"VNA"
3000
NOTE:
UNLESS OTHERWISE INSTRUCTED, AND EXCLUDING AIRCRAFT FROM "ONTAR" ALL AIRCRAFT TO HOME ON VOR "VNA". AT 14 DME "VNA" TURN TO INTERCEPT THE 12 DME ARC "VNA" TO POINT "MANGO" AND HOLD.
635
(194)
(Lighted)
Luanda
NDB 258
LU .-.. ..-_
S 08°50'
13
Luanda
L 358
CL _.-.-.-..
Luanda
ILS 110.3
ILD .. .-.. -.-
Luanda
VOR/DME 112.7
VNA ...-..-.-
S 08°50'43.72"
E 013°14'50.94"
MNM SECT ALT 25 NM "VNA"
2500
090°
270°
2500
SCALE
1 0 1 2 3 4 5 NM
VOR/DME
Transition Altitude - 3 000
NDB
LU
FAP
7.4 DME"VNA"
8.4 DME"ILD"
MANGO(IAF)
10 DME"VNA"
11 DME"ILD"
3000
(2768)
4.6 DME"VNA"
5.6 DME"ILD"
233°
2010
(1778)
VNA
G.P.3°
ILS RDH 49'
THR Elevation
RWY 23 - 232
MISSED APPROACH
Climb on R-233 to 10 DME VNA.
At 10 DME VNA turn right to intercept the 12 DME Arc VNA, climbing to 3000 FT ALT. Continue to MANGO and hold, or as directed.
5 4 3 2 1 0 1 2 3 4 5 6 7 8
ACFT Category | A | B | C | D
STRAIGHT IN APPROACH
CAT 1
DA (H) VIS | 432 (200) 800m
OCA (H) | 363 (131) | 373 (141) | 383 (151) | 393 (161)
GP INOP VIS | MDA (H) 670 (438) 1200m
CIRCLING MDA/CEILING VIS | 980 / 800 1900 | 2800 | 1020/800 3700 | 1120/900 4600
Speed | KT | 80 | 100 | 120 | 140 | 160 | 180
Time | min:s
RATE | ft/min
REV : New


LUANDA
INSTRUMENT
APPROACH
CHART - ICAO
AERODROME ELEV - 238ft
HEIGHTS RELATED TO
THR RWY- 05 ELEV - 235ft
GND - 121.9
TWR - 118.1
APP - 119.1
ACC - 118.5
VOR/DME
RWY 05
ACFT CAT - A to D
EFF 22 MAR 01
E 13°15'
BEARINGS ARE MAGNETIC
ALTITUDES, ELEVATIONS
AND HEIGHTS IN FEET
MNM SECT ALT 25 NM VNA
2500
090°
270°
2500
VAR 07°W 1995
635
(194)
(Lighted)
Luanda
L 358
CL _.-.-.-
Luanda
NDB 258
LU .-.. ..-
HOLD MNM FL40
(3000 FT Missed-Approach)
053°
S 08°50'
233°
3 DME
8 DME
053°
188°
008°
Luanda
VOR/DME 112.7
VNA ...-.-.-
S 08°50'42.97"
E 013°14'51.38"
13
SCALE
1 0 1 2 3 4 5 NM
Transition Altitude - 3 000
VOR/DME
3000
(2765)
FAF
8 DME
233°
1700
(1465)
053°
(4.4%)
VNA
3 DME
MAPt : 3 DME
MISSED APPROACH
Climb on Rwy hdg to 2500' ALT then
climb turn left to VOR to 3000' ALT
and hold, or as directed
THR Elevation
RWY 05 - 235
8 7 6 5 4 3 2 1 0 1 2 3
REV VOR CO-ORDS
MDA(H) / CEILING / VIS (m)
A
B
C
D
STRAIGHT - IN
APPROACH
730 (498) / 500
1500
2000
2500
CIRCLING MDA/CEILING
VIS
980 / 800
1900
2800
1020/800
3700
1120/900
4600
8 DME to 3 DME(MAPt)
Speed KT 80 100 120 140 160 180
Time min:s 3:45 3:00 2:30 2:08 1:52 1:40
RATE ft/min 350 440 530 620 710 800


LUANDA
INSTRUMENT
APPROACH
CHART - ICAO
AERODROME ELEV - 238ft
HEIGHTS RELATED TO
DISPLACED THR RWY- 23 ELEV - 232ft
GND - 121.9
TWR - 118.1
APP - 119.1
ACC - 118.5
VOR/DME
RWY 23
ACFT CAT - A to D
EFF 22 MAR 01
ALTITUDES, ELEVATIONS
AND HEIGHTS IN FEET
BEARINGS ARE MAGNETIC
VAR 07°W 1995
E 13°15'
12 DME Arc"VNA"
13 DME Arc"ILD"
3000
053°
HOLD MNM FL40
(3000 FT Missed-Approach)
R-043
233°
Mango
°S 08°43'44.89"
°E 013°22'06.78"
VNA 10 DME
ONTAR
MT 065° FROM
30 DME
Sea
NOTE:
UNLESS OTHERWISE INSTRUCTED,
AND EXCLUDING AIRCRAFT FROM
"ONTAR" ALL AIRCRAFT TO HOME
ON VOR "VNA". AT 14 DME "VNA"
TURN TO INTERCEPT THE 12 DME
ARC "VNA" TO POINT "MANGO"
AND HOLD.
233°
12 DME Arc
3000
R-233
FAF
5 DME
535
(194)
(Lighted)
Luanda
NDB 258
LU
S 08°50'
Luanda
L 358
CL
Luanda
VOR/DME 112.7
VNA
S 08°50'42.97"
E 013°14'51.38"
MNM SECT ALT 25 NM - VNA
2500
090°
270°
2500
SCALE
1 0 1 2 3 4 5 NM
VOR/DME
Transition Altitude - 3 000
MISSED APPROACH
Climb on R-233 to 10 DME VNA.
At 10 DME VNA turn right to intercept
the 12 DME Arc VNA, climbing to 3000
FT ALT. Continue to MANGO and hold,
or as directed
VNA
FAF
5 DME
233°
4%
MANGO
10 DME
3000
(2788)
5%
1800
(1568)
MAPt : VOR/DME
THR Elevation
RWY 23 - 232
5 4 3 2 1 0 1 2 3 4 5 6 7 8
MDA(H) / CEILING / VIS (m)
A
B
C
D
STRAIGHT - IN
APPROACH
730 (498) / 500
1500
2000
2500
CIRCLING MDA/CEILING
VIS
980 / 800
1900
2800
1020/800
3700
1120/900
4600
5 DME to MAPt
Speed KT 60 100 120 140 160 180
Time min:s 3:45 3:00 2:30 2:08 1:52 1:40
RATE ft/min 410 510 620 720 820 920
REV : VOR CO-ORDS

1	LOCATION INDICATOR	AERODROME NAME	
	FNUE	LUENA/Moxico	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	11°46'07''S 019°53'50''E
2	Direction and distance from city	NNW/2.6 KM from LUENA
3	Elevation/Reference temperature	1355M /4446FT / 30.0 °C
4	Magnetic variation/Annual change	4.5°W (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	NIL
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	NIL
10	Security	NIL
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Nil
2	Fuel/Oil types	NIL/NIL
3	Fuelling capacity	NIL
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	Nil
2	Rescue equipment	Nil
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	Nil
2	Clearance priorities	Nil
3	Remarks	Nil

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS che	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Radio Mast 1400.6 M	11º47'00"S 019º55'20"E	

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6
11	103.98	2394 X 45	ASPH	11°45'56''S 019°53'13''E	1357.86
29	283.98	2394 X 45	ASPH	11°46'15''S 019°54'30''E	1354.23

Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
-0.15%	NIL	NIL	NIL	NIL	NIL
0.15%	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	**2**	**3**	**4**	**5**	**6**
11	2394	2400	2394	2394	NIL
29	2394	2400	2394	2394	NIL

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
11	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
29	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16 HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17 ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18 ATS COMMUNICATION FACILITIES

Service	Call sign	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
AFIS	LUENA Tower	118.9	NIL	NIL	HJ	NIL

19 RADIO NAVIGATION AND LANDING AIDS

Type	ID	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
VOR/DME	VUE	113.7 MHz	11°45'57''S 019°53'51''E	NIL	H24	150 NM
NDB	UE	375.0 KHZ	11°45'44''S 019°53'57''E	NIL	H24	150 NM

20 LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	NIL
3	Removal of disabled aircraft from runways	NIL

21 NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE ''UE'' NDB RWY 11	
1.1	General Information	
	1. Transition Level	By TWR
	2. Transition Altitude	7000 FT
	3. Minimum Sector Altitude	
	a) Within 25 NM of ''UE'' NDB (ALL SECTORS)	5800 FT
	4. Aerodrome Elevation	4364 FT
	5. Threshold Elevation	4364 FT
1.2	Navigation	
	NIL	
1.3	En route Segment	Aircraft arrive overhead "UE" NDB at minimum enroute flight level and shutlle on holding pattern to transition altitude 7000 Ft QNH.
1.4	Holding On ``UE´´ NDB	NIL
1.5	Initial Segment	NIL
1.6	Intermediate Segment	NIL
1.7	Final Approach Segment	NIL
1.8	Missed Approach Segment	NIL

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO LUENA/ Moxico AERODROME

	Charts	Pages
	NIL	

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1	LOCATION INDICATOR	AERODROME NAME	
	FNSA	SAURIMO/Saurimo	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	09°41'20''S 020°25'51''E
2	Direction and distance from city	SE/5 KM from SAURIMO
3	Elevation/Reference temperature	1093M /3586FT / 25.0 °C
4	Magnetic variation/Annual change	3.4°W (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	NIL
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	NIL
9	Handling	NIL
10	Security	NIL
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

L

1	Cargo-handling facilities	NI
2	Fuel/Oil types	NIL/NIL
3	Fuelling capacity	NIL
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS che	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Mil Comms Mast 1120.0 M	09º41'30"S 020º25'34"E	

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	True Bearing	Dimension of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates	THR Elevation and Highest elevation of DTZ of precision APP RWY
1	2	3	4	5	6
13	130.14	3400 X 45	ASPH	09°40'45''S 020°25'11''E	NIL
31	310.14	3400 X 45	ASPH	09°41'56''S 020°26'37''E	NIL

Slope of RWY-SWY	SWY Dimention (M)	CWY Dimention (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
0.01%	NIL	NIL	NIL	NIL	NIL
0.01%	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	APRONS
1	**2**	**3**	**4**	**5**	**6**
13	3400	3400	3400	3400	NIL
31	3400	3400	3400	3400	NIL

14	APPROACH AND RUNWAY LIGHTING

RWY ID	APPROACH Lights Type Lenght Intensity	Treshold Lights Colour WBAR	VASIS PAPI	TDZ Lights Length	RWY CL Lights Spacing Colour Intensity	RWY DGE Lights Spacing Colour Intensity	RWY END Lights Colour WBAR	SWY Lights Length Colour	Remarks
1	2	3	4	5	6	7	8	9	10
13	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
31	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/nil
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	**Call sign**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	2	3	4	5	6	7
AFIS	Saurimo Tower	118.9 MHz	NIL		HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	**ID**	**Frequency**	**Coordinates**	**Emission**	**Operational hours**	**Remarks**
1	**2**	**3**	**4**	**5**	**6**	**7**
VOR/DME	VSA	117.1 MHz	09°41'17''S 020°26'03''E	NIL	H24	NIL
NDB	SA	293.0 KHZ	09°39'44''S 020°23'59''E	NIL	HJ	200 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact SAURIMO Tower
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE	NIL
1.1	General Information	NIL
1.2	Navigation	NIL
1.3	En route Segment	NIL
1.4	Holding On ``SA´´ NDB	NIL
1.5	Initial Segment	NIL
1.6	Intermediate Segment	NIL
1.7	Final Approach Segment	NIL
1.8	Missed Approach Segment	NIL

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO SAURIMO/ Saurimo AERODROME

	Charts	Pages
	NIL	

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1	LOCATION INDICATOR	AERODROME NAME	
	FNMO	NAMIBE/Yuri Gagarine	

2	AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP Coordinates	15°15'34''S 012°08'56''E
2	Direction and distance from city	S/7.6 KM from NAMIBE
3	Elevation/Reference temperature	70M /230FT / 29.0 °C
4	Magnetic variation/Annual change	9.3°W (2008)
5	AD Administration, address, Telephone, telefax, AFS	ENANA-EP
6	Type of traffic permitted (IFR/VFR)	IFR/VFR
7	Remarks	NIL

3	OPERATIONAL HOURS

1	Aerodrome Administration	HJ From Monday to Friday
2	Customs and Immigration	HJ
3	Health and sanitation	HJ
4	AIS Briefing office	NIL
5	ARO Reporting office	HJ
6	Met Briefing office	NIL
7	ATS	HJ
8	Fuelling	HJ
9	Handling	NIL
10	Security	NIL
11	De-Icing	NIL
12	Remarks	NIL

4	HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	Nil
2	Fuel/Oil types	JET A1/NIL
3	Fuelling capacity	30000 Litres
4	De-Icing facilities	NIL
5	Hangar apace for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

5	PASSENGER FACILITIES

1	Hotels	In the Town
2	Restaurants	In the Town
3	Transportation	Taxi
4	Medical facilities	In the Town
5	Bank and Post office	In the Town
6	Touristic office	NIL
7	Remarks	NIL

6	RESCUE AND FIRE FIGHTING SERVICES

1	Aerodrome category for fire fighting	NIL
2	Rescue equipment	NIL
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

7	SEASONAL AVAILABILITY AND CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

8	APRONS, TAXIWAYS AND CHECK LOCATIONS DATA

1	Apron surface and strength	Surface: ASPH
2	TWY width, surface and strength	Surface: ASPH
3	ACL location/Elevation	NIL
4	VOR/INS che	VOR: NIL/INS: NIL
5	Remarks	NIL

9	SURFACE MOVEMENTGUIDANCE AND CONTRO SYSTEM MARKINGS

1	Use of aircraft stand identification sign, TWY guide lines and visual docking/parking guidance system of aircraft stands	NIL
2	RWY and TWY markings and lights	NIL
3	Stop bars	NIL
4	Remarks	NIL

10	AERODROME OBSTACLE

In approach and take off areas			In circling area and at aerodrome		Remarks
1			2		3
RWY and area affected	Obstacle type Elevation Markings and Lights	Coordinates	Obstacle type Elevation Markings and Lights	Coordinates	
a	b	c	a	b	
			Namibe Telecom 69.8 M	15º11'20"S 012º09'10"E	
			Comms Mast 96.1 M	15º12'31"S 012º08'24"E	
			Water Tower 77.7 M	05º34'15''S 012º11'60''E	
			TPA Tower 90.4 M	15º12'00"S 012º07'29"E	

11	METEOROLOGICAL INFORMATION

1	Associated MET office	See GEN 3.5
2	Hours of service	See GEN 3.5
3	Office responsible of TAF preparation/Period of validity	See GEN 3.5
4	Type of landing forecast/Interval of issuance	See GEN 3.5
5	Briefing and consultation provided	See GEN 3.5
6	Flight documentation/Language used	See GEN 3.5
7	Chart and other information available for briefing or consultation	See GEN 3.5
8	Supplementary equipment available for providing information	See GEN 3.5
9	ATS units provided with information	See GEN 3.5
10	Climatological information and additional information	See GEN 3.5

12	RUNWAY PHYSICAL CHARACTERISTICS

Designation RWY Nº	**True Bearing**	**Dimension of RWY (M)**	**Strength (PCN) and surface of RWY and SWY**	**THR coordinates**	**THR Elevation and Highest elevation of DTZ of precision APP RWY**
1	2	3	4	5	6
08	66.55	2500 x 45	ASPH	15°15'57''S 012°08'10''E	NIL
26	246.54	2500 x 45	ASPH	15°15'25''S 012°09'26''E	NIL

Slope of RWY-SWY	**SWY Dimention (M)**	**CWY Dimention (M)**	**Strip dimensions (M)**	**OFZ**	**Remarks**
7	8	9	10	11	12
0.44%	NIL	NIL	NIL	NIL	NIL
-0.44%	NIL	NIL	NIL	NIL	NIL

13	DECLARED DISTANCES

RWY designator	**TORA (M)**	**TODA (M)**	**ASDA (M)**	**LDA (M)**	**APRONS**
1	**2**	**3**	**4**	**5**	**6**
08	2500	2500	2500	2500	NIL
26	2500	2500	2500	2500	NIL

14	**APPROACH AND RUNWAY LIGHTING**

RWY ID	**APPROACH Lights** **Type Lenght Intensity**	**Treshold Lights** **Colour WBAR**	**VASIS PAPI**	**TDZ Lights** **Length**	**RWY CL Lights** **Spacing Colour Intensity**	**RWY DGE Lights** **Spacing Colour Intensity**	**RWY END Lights** **Colour WBAR**	**SWY Lights** **Length Colour**	**Remarks**
1	2	3	4	5	6	7	8	9	10
08	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
26	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

15	OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	NIL/NIL
2	LDI location and lights Anemometer location and lights	LDI: On top of Tower Anemometer: NIL
3	TWY edge and centre line lighting	NIL/NIL
4	Secondary power supply/Switch over time	NIL/NIL
5	Remarks	NIL

16	HELICOPTERS LANDING AREA

1	Position	NIL
2	Elevation	NIL
3	Dimensions, surface, strength, marking	NIL
4	Bearing	NIL
5	Declared distances	NIL
6	Lighting	NIL
7	Remarks	NIL

17	ATS AIRSPACE

Designation and lateral limits	Vertical limits	Airspace classification	ATS unit call sign Language	Transition altitude	Remarks
1	2	3	4	5	6
NIL	NIL	NIL	NIL	NIL	NIL

18	ATS COMMUNICATION FACILITIES

Service	Call sign	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
AFIS	NAMIBE Tower	118.1 MHz	NIL	NIL	HJ	NIL

19	RADIO NAVIGATION AND LANDING AIDS

Type	ID	Frequency	Coordinates	Emission	Operational hours	Remarks
1	2	3	4	5	6	7
VOR/DME NDB	VMO	114.1 MHz CH 88X	15°15'13"S 012°09'54"E	NIL	H24	100 NM
	MO	358.0 KHZ	15°15'00"S 012°10'25"E	NIL	H24	100 NM

20	LOCAL TRAFFIC REGULATIONS

1	Airport regulation	NIL
2	Taxing to and from stands	Contact Namibe Tower
3	Removal of disabled aircraft from runways	NIL

21	NOISE ABATEMENT PROCEDURES

1	General	NIL

22	NOISE ABATEMENT PROCEDURES

1	HOLDING AND INSTRUMENT PROCEDURE	See Chart
1.1	General Information	NIL
1.2	Navigation	NIL
1.3	En route Segment	NIL
1.4	Holding On ``MO´´ NDB	NIL
1.5	Initial Segment	NIL
1.6	Intermediate Segment	NIL
1.7	Final Approach Segment	NIL
1.8	Missed Approach Segment	NIL

23	ADDITIONAL INFORMATION

NIL

24	CHARTS RELATED TO NAMIBE/ Yuri Gagarine AERODROME

	Charts	Pages
	NIL	

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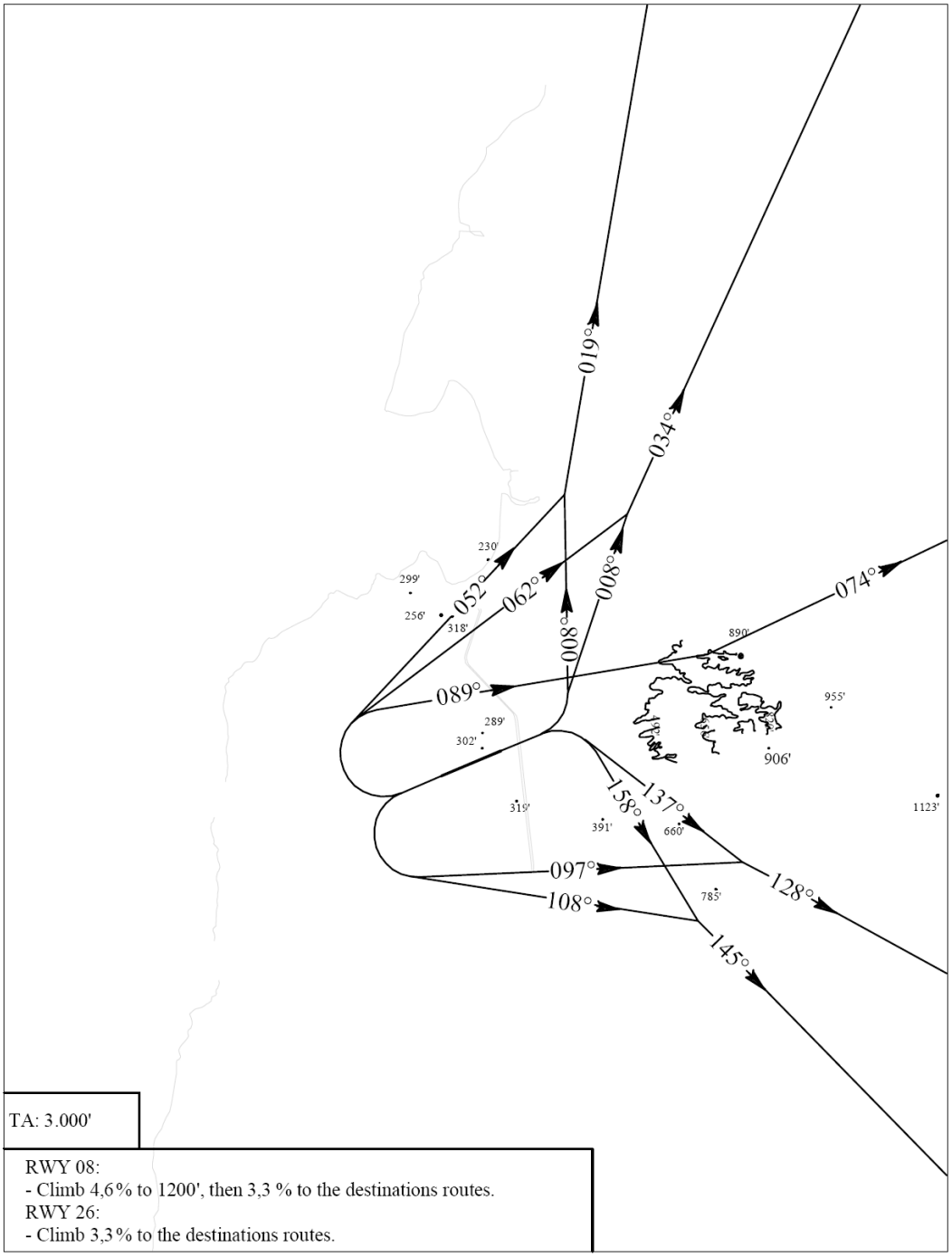
SID

FNMO

TWR 118.1

ANGOLA
NAMIBE/YURI GAGARINE
ETBON - BENGUELA - LUBANGO - ONDJIVA - RC

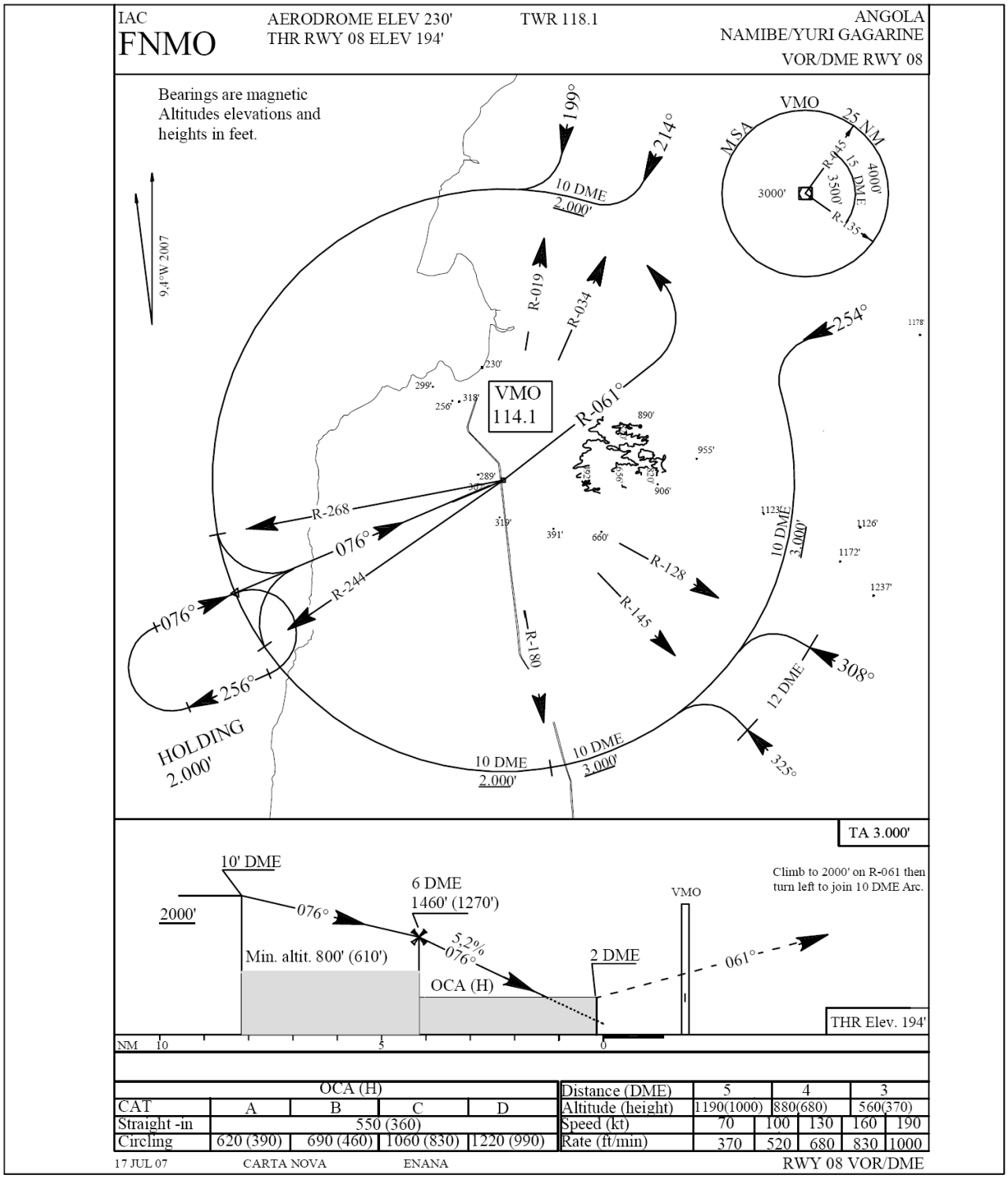


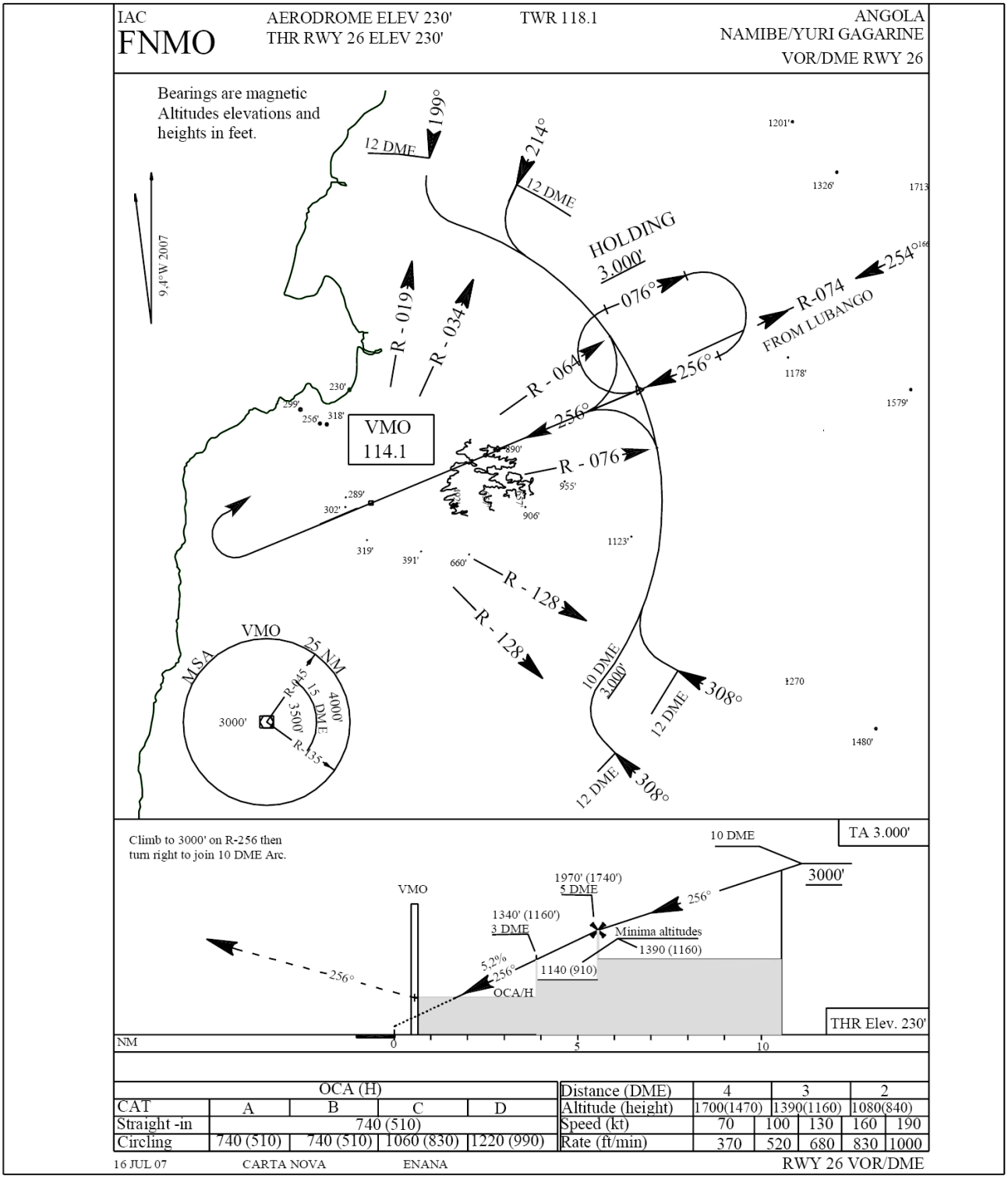
TA: 3.000'

RWY 08:
- Climb 4,6 % to 1200', then 3,3 % to the destinations routes.

RWY 26:
- Climb 3,3 % to the destinations routes.

21 JUL 07 CARTA NOVA ENANA

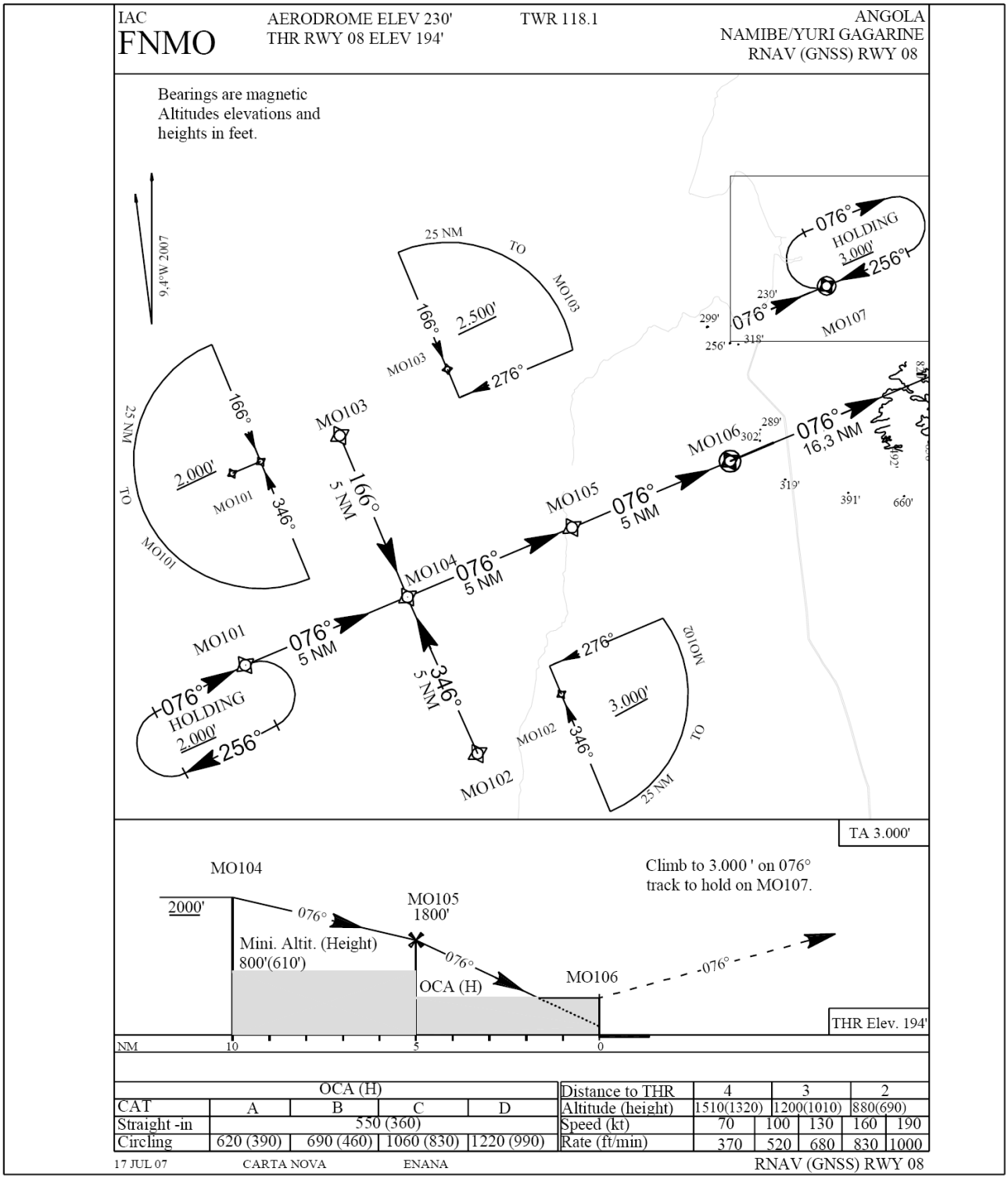

IAC
FNMO
AERODROME ELEV 230'
THR RWY 08 ELEV 194'
TWR 118.1
ANGOLA
NAMIBE/YURI GAGARINE
VOR/DME RWY 08
Bearings are magnetic
Altitudes elevations and
heights in feet.
9.4°W 2007
VMO
MSA
25 NM
15 DME
4000'
3500'
3000'
R-045
R-135
199°
214°
10 DME
2.000'
R-019
R-034
VMO
114.1
R-061°
254°
R-268
076°
R-244
076°
256°
HOLDING
2.000'
R-128
R-145
R-180
10 DME
3.000'
308°
12 DME
325°
10 DME
2.000'
10 DME
3.000'
TA 3.000'
10' DME
2000'
076°
6 DME
1460' (1270')
5.2%
076°
Min. altit. 800' (610')
OCA (H)
2 DME
VMO
061°
Climb to 2000' on R-061 then
turn left to join 10 DME Arc.
THR Elev. 194'
NM 10
5
0
OCA (H)
CAT
A
B
C
D
Straight -in
550 (360)
Circling
620 (390)
690 (460)
1060 (830)
1220 (990)
Distance (DME)
5
4
3
Altitude (height)
1190(1000)
880(680)
560(370)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
370
520
680
830
1000
17 JUL 07
CARTA NOVA
ENANA
RWY 08 VOR/DME

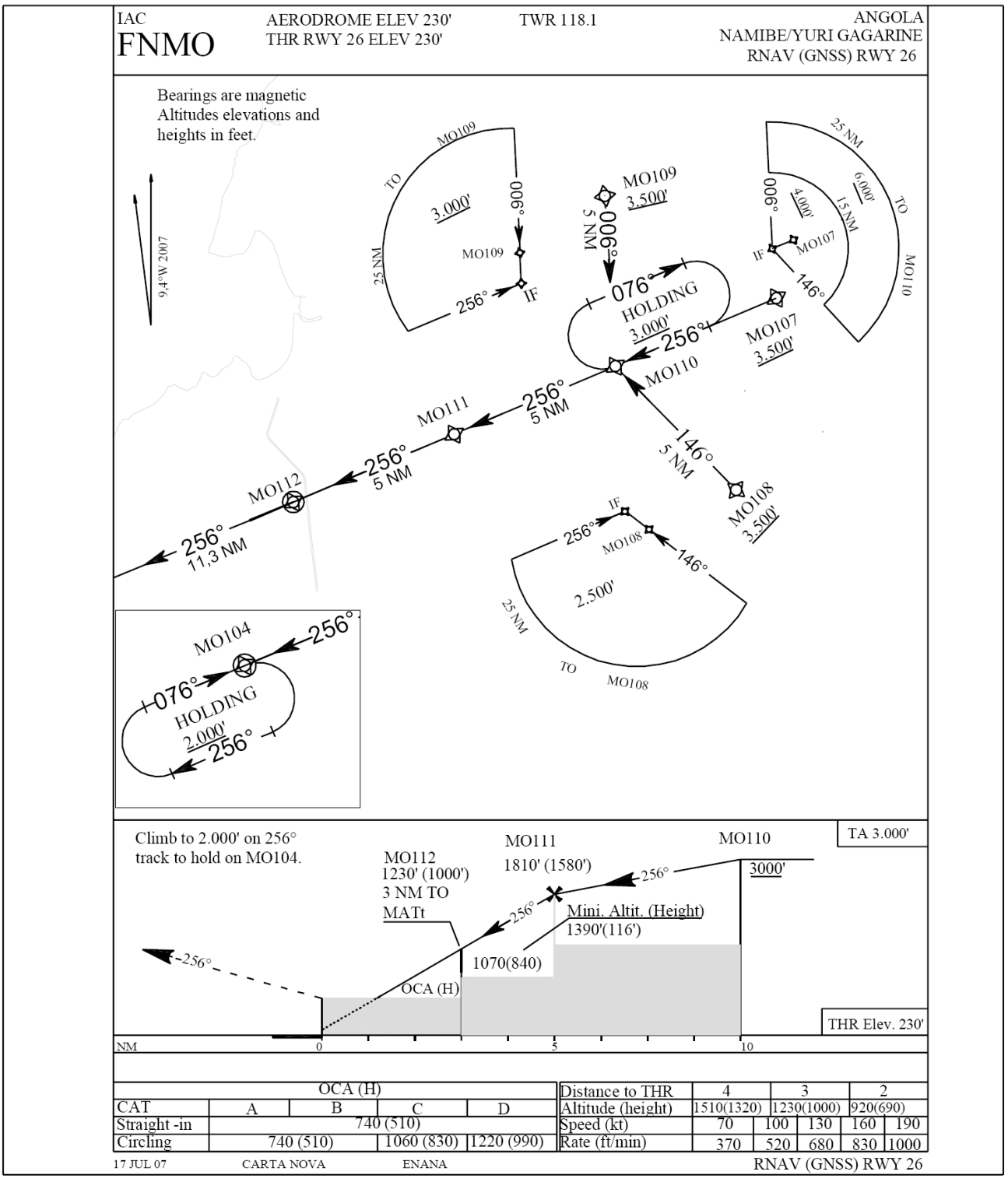


OCA (H)				
CAT	A	B	C	D
Straight -in	740 (510)			
Circling	740 (510)	740 (510)	1060 (830)	1220 (990)

Distance (DME)	4	3	2		
Altitude (height)	1700(1470)	1390(1160)	1080(840)		
Speed (kt)	70	100	130	160	190
Rate (ft/min)	370	520	680	830	1000

16 JUL 07 CARTA NOVA ENANA RWY 26 VOR/DME


IAC
FNMO
AERODROME ELEV 230'
THR RWY 08 ELEV 194'
TWR 118.1
ANGOLA
NAMIBE/YURI GAGARINE
RNAV (GNSS) RWY 08
Bearings are magnetic
Altitudes elevations and
heights in feet.
9.4°W 2007
25 NM
TO
MO103
166°
2.500'
276°
MO103
166°
5 NM
MO104
076°
5 NM
MO105
076°
5 NM
MO106
302'
289'
076°
16,3 NM
319'
391'
660'
MO107
076°
HOLDING
3.000'
256°
230'
299'
318'
256'
25 NM
TO
MO101
166°
2.000'
MO101
346°
MO101
076°
5 NM
+076°
HOLDING
2.000'
256°
346°
5 NM
MO102
276°
3.000'
346°
MO102
TO
25 NM
TA 3.000'
MO104
2000'
076°
MO105
1800'
Mini. Altit. (Height)
800'(610')
076°
OCA (H)
MO106
076°
Climb to 3.000 ' on 076°
track to hold on MO107.
THR Elev. 194'
NM
10
5
0
OCA (H)
CAT
A
B
C
D
Straight -in
550 (360)
Circling
620 (390)
690 (460)
1060 (830)
1220 (990)
Distance to THR
4
3
2
Altitude (height)
1510(1320)
1200(1010)
880(690)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
370
520
680
830
1000
17 JUL 07
CARTA NOVA
ENANA
RNAV (GNSS) RWY 08


IAC
FNMO
AERODROME ELEV 230'
THR RWY 26 ELEV 230'
TWR 118.1
ANGOLA
NAMIBE/YURI GAGARINE
RNAV (GNSS) RWY 26
Bearings are magnetic
Altitudes elevations and
heights in feet.
9,4°W 2007
MO109
TO
3.000'
900°
MO109
25 NM
256°
IF
MO109
3.500'
5 NM
900°
076°
HOLDING
3.000'
256°
MO110
MO107
3.500'
146°
IF
MO107
900°
4.000'
15 NM
25 NM
6.000'
TO
MO110
MO111
256°
5 NM
MO112
256°
5 NM
256°
11,3 NM
146°
5 NM
MO108
3.500'
IF
256°
MO108
146°
2.500'
25 NM
TO
MO108
MO104
256°
076°
HOLDING
2.000'
256°
Climb to 2.000' on 256°
track to hold on MO104.
MO112
1230' (1000')
3 NM TO
MATt
MO111
1810' (1580')
MO110
TA 3.000'
256°
3000'
256°
Mini. Altit. (Height)
1390'(116')
256°
1070(840)
OCA (H)
THR Elev. 230'
NM
0
5
10
OCA (H)
CAT
A
B
C
D
Straight -in
740 (510)
Circling
740 (510)
1060 (830)
1220 (990)
Distance to THR
4
3
2
Altitude (height)
1510(1320)
1230(1000)
920(690)
Speed (kt)
70
100
130
160
190
Rate (ft/min)
370
520
680
830
1000
17 JUL 07
CARTA NOVA
ENANA
RNAV (GNSS) RWY 26

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