

# GOVERNMENT GAZETTE

## OF THE

# REPUBLIC OF NAMIBIA

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## Government Notice

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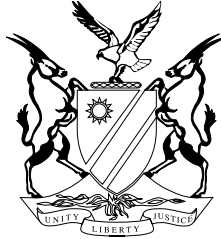
#### MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

No. 9

2004

#### CIVIL AVIATION TECHNICAL STANDARDS NAM-CATS-ATS "AIRSPACE AND AIR TRAFFIC SERVICES"

The Director: Civil Aviation has under regulation 11.03.05 of the Namibian Civil Aviation Regulations, 2001 and in consultation with the Civil Aviation Regulations Committee issued the technical standards in the Schedule. These technical standards shall come into operation on 23 January 2004.



**REPUBLIC OF NAMIBIA**

**CIVIL AVIATION**

**DOCUMENT NAM-CATS-ATS  
(AIRSPACE AND AIR TRAFFIC SERVICE)**

**NAMIBIAN CIVIL AVIATION TECHNICAL  
STANDARDS RELATING TO AIRSPACE AND AIR TRAFFIC SERVICES**

**1. GENERAL**

Section 22A of the Aviation Act, 1962 (as amended by section 5 of the Aviation Amendment Act, 1998) empowers the Director: Civil Aviation to issue technical standards for civil aviation on the matters which are prescribed by regulation.

The Director: Civil Aviation has pursuant to the empowerment mentioned above, on 23 January 2004 issued technical standards relating to airspace and air traffic services to be known as Document NAM-CATS-ATS.

**2. PURPOSE**

Document NAM-CATS-ATS contains the standards, rules, requirements, methods, specifications, characteristics and procedures which are applicable in respect of airspace and air traffic services.

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Namibian Civil Aviation Regulations, 2001, for example, technical standard 172.03.12 refers to regulation 12 of Subpart 03 of Part 172 of the Regulations.

The abbreviation "CAR" is used throughout this document when referring to any regulation.

The abbreviation "CATS" refers to any technical standard.

**3. SCHEDULES AND NOTES**

Guidelines and recommendations in support of any particular technical standard, are contained in schedules to, and/or notes inserted throughout the technical standards.

**4. INCORPORATION OF INTERNATIONAL AVIATION STANDARDS**

Section 22A(3) of the Aviation Act, 1962 (as amended by section 5 of the Aviation Amendment Act, 1998) empowers the Director: Civil Aviation to incorporate into a technical standard any international standard or recommended practice or procedure adopted by the International Civil Aviation Organisation (ICAO).

The Air Navigation Plan - Africa-Indian Ocean Region (Document 7474/26), approved and published by a decision of the Council of ICAO, as amended from time to time, is incorporated into the technical standards contained in this document.

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**172.02.2 CLASSIFICATION OF AIRSPACE****1. Classes of airspace**

Air traffic service airspaces are classified as follows:

*Class A.* IFR flights only are permitted, all flights are subject to air traffic control service and are separated from each other.

*Class B.* IFR and VFR flights are permitted, all flights are subject to air traffic control service and are separated from each other.

*Class C.* IFR and VFR flights are permitted, all flights are subject to air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights.

*Class D.* IFR and VFR flights are permitted and all flights are subject to air traffic control service. IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights. VFR flights receive traffic information in respect of all other flights.

*Class E.* IFR and VFR flights are permitted, IFR flights are subject to air traffic control service and are separated from other IFR flights. All flights receive traffic information as far as is practical.

*Class F.* IFR and VFR flights are permitted, all participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested.

*Class G.* IFR and VFR flights are permitted and receive flight information service if requested.

**Note:** *The requirements for flights within each class of airspace, are contained in Table 1.*

#### **172.02.4 DESIGNATION OF FLIGHT INFORMATION REGIONS**

##### **1. Requirements for the designation of a flight information region**

- (1) The Director must take into consideration the recommendations made by the National Airspace Committee, established in terms of Part 11, and consult the regional planning requirements set out in the Air Navigation Plan - Africa-Indian Ocean Region (ICAO AFI plan).
- (2) Flight information regions must be delineated to cover the whole of the air route structure to be served by such regions.
- (3) A flight information region must include all airspace within its lateral limits, except as limited by an upper flight information region.
- (4) Where a flight information region is limited by an upper flight information region, the lower limit specified for the upper flight information region constitutes the upper vertical limit of the flight information region and must coincide with a VFR cruising level.
- (5) The flight information region must be published in accordance with the AIRAC Cycle in an AIP, AIP SUP or a NOTAM.

#### **172.03.1 MANUAL OF PROCEDURE**

##### **1. Contents**

- (1) The manual of procedure must contain -
  - (a) a statement signed by the accountable manager, on behalf of the applicant, confirming that the manual of procedure -
    - (i) demonstrates the means and methods for ensuring ongoing compliance with the requirements prescribed in this Part; and
    - (ii) will be complied with at all times;
  - (b) a list of air traffic service units operated by the applicant;
  - (c) an organisational chart showing lines of responsibility of the organisation's personnel;

- (d) a declaration stating that the air traffic service unit holds a copy of the air traffic control instructions issued in terms of this document, and that the air traffic service unit will operate in compliance with the air traffic control instructions;
- (e) the quality assurance system;
- (f) a list of facilities as required for each air traffic service unit;
- (g) a copy of the station standing instructions, and -
  - (i) where one air traffic service unit is operated, a complete copy must be provided with the manual;
  - (ii) where more than one air traffic service unit is operated, the signature page of each copy must be included in the manual of procedure with a statement that the station standing instructions are held by the air traffic service unit and that it is current and will be amended from time to time;
- (h) a list of the documentation held by each air traffic service unit;
- (i) a copy of the internal inspections procedure;
- (j) a copy of the reporting procedure used to report aeronautical information to the Director;
- (k) a copy of the procedure for the reporting and investigation of accidents and incidents;
- (l) the procedure for amending and controlling the contents of the manual of procedure; and
- (m) a statement of the scope of approval being applied for.

### **172.03.2 QUALITY ASSURANCE SYSTEM**

#### **1. Minimum standards for quality assurance system**

- (1) The quality assurance system referred to in CAR 172.03.2, must include -
  - (a) a clear definition of the level of quality the organisation intends to achieve;
  - (b) a procedure that sets out the level and frequency of the internal reviews and assessments of air traffic service personnel;
  - (c) a procedure to record the findings and communicate them to management;
  - (d) a list of responsible persons;
  - (e) procedures by which other quality indicators such as facility malfunction reports, incidents, occurrences, complaints and defects are brought into the quality assurance system;
  - (f) procedures for management analysis and overview;
  - (g) procedures for rectifying any deficiencies which may be found; and

- (h) procedures for documenting the complete review process from the inspection to the satisfactory management review so that this is available to the Director during a safety inspection and audit.
- (2) Measures must be taken to ensure that the system is understood, implemented and complied with at all levels.
- (3) The quality assurance system must be documented in the manual of procedure referred to in CAR 172.03.1.

## **2. Assessment of air traffic service personnel**

- (1) As part of the quality assurance system, the holder of an air traffic service unit approval must assess the air traffic service personnel in his, her or its employ.
- (2) A formal proficiency assessment must be carried out before a validation certificate or a rating validation can be issued to assess whether the applicant has achieved the demanded level of competence.
- (3) In addition, a formal assessment must be carried out at least every 12 months to determine whether all operational personnel are maintaining the required level of competence in the positions for which a valid rating is held. Routine assessments should be conducted on an on-going basis during duty assignment.
- (4) Personnel must be assessed in key elements of the performance areas detailed on an assessment form.
- (5) An assessment must be made of both the quality of work and the level of knowledge of the elements assessed.
- (6) The person conducting the assessment must record the assessment on the form contained in Annexure A, together with relevant remarks and any discrepancies noted. Assessments must be retained on the controllers' unit training record.
- (7) Proficiency checks must be part of the process of assessing efficiency of personnel and must be conducted progressively throughout the year.
- (8) The assessment system must not be directed at fault finding, but should be an objective and constructive means through which individual controllers are encouraged and led towards higher personal achievement.
- (9) A proficiency assessment record must be maintained for each controller and each record must indicate the objective and impartial judgement of an individual's ability, based on regular checks and continuous observation.
- (10) The acceptance of proficiency checks as a process of personnel assessment and development is determined to a large degree by the objectivity, honesty and integrity with which the checks are administered and the degree of participation and protection afforded the individual controller. Counselling is an important feature in controller development and therefore controllers undergoing the assessment must be made aware, by formal and informal counselling, of the assessments and remarks made by the assessing officer on the proficiency assessment record. Strengths as well as weaknesses must be discussed with the controller.
- (11) If a controller performs his or her duties in a manner which causes doubt as to the acceptable standard of his or her performance, an assessment must be made at any time irrespective of the period of time that has elapsed since



the completion of the last preceding assessment. This assessment must require the controller to demonstrate an acceptable standard of performance and knowledge in each of the key elements in his or her performance which are being checked.

- (12) When corrective training is indicated, the assessing officer must record on the assessment record whether the controller is competent to continue performing operational duties while he or she is under training. Should the assessing officer consider that the controller being assessed is not competent, the person responsible for providing the service should be notified immediately.
- (13) An oral examination conducted by the assessing officer may be used to determine the level of knowledge in the key aspects of the rating which is being assessed. The oral examination must be conducted separately from the practical assessment.
- (14) Check/assessment list

The following minimum points must be evaluated when assessing the individual performance of a controller:

- (a) Aerodrome / approach -
  - (i) knowledge of separation standards and their application;
  - (ii) recognition of aircraft capabilities, i.e. differences in speed, climb, descent, altitude requirements, take-off / landing requirement, engine failure performance, and other differences of performance;
  - (iii) awareness and analysis of traffic situations;
  - (iv) planning, sequencing and expedition of the traffic flow;
  - (v) adjusting traffic to changing conditions in case of radar failure or radio aid failure;
  - (vi) changes in flight rules, aerodrome closures, low visibility procedures and diversions;
  - (vii) use of local procedures such as selection of runways, noise abatement procedures, departure and instrument approach procedures;
  - (viii) coordination with other sectors or units, including methods of transfers and updating of information;
  - (ix) utilisation of radar;
  - (x) composition of clearances in respect of contents, clarity, conciseness and expedition;
- (b) flight information procedures -
  - (i) receipt, recording and checking of flight plans;
  - (ii) issuance of essential flight information on collision hazards;

- (iii) passing of clearances and flight information to aircraft, including their correctness, identification of originators and, where necessary, time limitations;
- (iv) recognition of aircraft capabilities;
- (v) knowledge of local procedures;
- (vi) coordination procedures with other air traffic service units;
- (c) radar procedures -
  - (i) methods of identification of targets including those used in case of mis-identification, re-identification, after fade area, blind velocity and merging of targets;
  - (ii) adherence to prescribed separation standards;
  - (iii) recognition of aircraft capabilities;
  - (iv) composition of clearances when using radar;
  - (v) radar control of arriving traffic, its sequencing, vectoring and provision of adequate terrain clearance;
  - (vi) radar control of departing traffic, including radar releases and traffic expedition;
  - (vii) radar control of overflying traffic including vectoring;
  - (viii) methods of transfer of radar control including instructions to aircraft, transfer of control to final radar controller and transfer of control to aerodrome control;
  - (ix) provision of radar position information to aircraft;
  - (x) provision of radar-derived navigation assistance to aircraft;
  - (xi) provision of radar-derived traffic information, including the use of such information, its necessity and need for unambiguity;
  - (xii) provision of radar-derived assistance to aircraft in emergency;
  - (xiii) coordination with other sectors or units;
- (d) radar vectors -

conduct of surveillance radar vectors, their accuracy and positioning, their sequencing and issue of advice on distances;
- (e) radar equipment -
  - (i) equipment operation and alignment, including setting up and check procedures, level of brilliance, map, range rings, and checking accuracy;
  - (ii) recognition of types of interference, including those caused by terrain and weather, blind velocity and tangential velocity;
  - (iii) recognition of fade areas and application of possible counter measures;

- (f) radio and telephone -
  - (i) use of correct procedures and phraseology knowledge of coverage limitations, call signs, abbreviated procedures, phraseologies, unnecessary repetitions, and use of correct position identifier;
  - (ii) clarity, modulation, speed, diction and evenness of voice communications;
  - (iii) promptness of response, confidence and avoidance of uncertainties;
  - (iv) adequacy of monitoring of air-ground communication channels;
  - (v) courtesy, attitude, and co-operativeness in telephone communications;
- (g) data display -
  - (i) posting and updating of flight data and other relevant information;
  - (ii) acceptance and use of meteorological reports;
  - (iii) dissemination of meteorological reports to aircraft;
- (h) loss of communication and alerting service procedures -
  - (i) recognition and response to loss of communication situation and promptness of action;
  - (ii) response to likely emergency situations;
  - (iii) use of correct emergency procedures - type of emergency, appropriateness of procedures;
  - (iv) declaration of alerting phases and co-operation with search and rescue services;
  - (v) action in performance of local operating procedures;
  - (vi) response to cases of unlawful interference with aircraft;
- (i) responsibilities -
  - (i) it is the responsibility of the officer-in-charge to establish and maintain unit proficiency standards;
  - (ii) specific senior officers are to be appointed and tasked by the person responsible for the service as proficiency assessment officers (standards officers) for each discipline;
  - (iii) at units where operational staff are multi-disciplined, the person responsible for the service must appoint and task at least one standards officer. Standards officers may be appointed and tasked for each discipline although it is a multi-disciplined environment;

- (iv) at approach and/or aerodrome units, the manager is to appoint and task the officer or air traffic controller responsible for satellite units as the standards officer;
- (v) a person assessed as unsatisfactory may not be permitted to continue in the assessed discipline without supervision. If after a reasonable period a person is unable to pass the proficiency check, all details pertaining to the unsatisfactory assessment must be assembled and sent to the Director;
- (vi) standards officers must prepare proficiency check rosters so that all operational staff are screened on a regular basis. Personnel must be given advanced notice of a real time annual proficiency check so that adequate preparation, mentally and functionally, can be made.

*Note: Although the check list is comprehensive it should not be considered exhaustive.*

#### **172.03.4 FACILITY REQUIREMENTS**

##### **1. General**

The following minimum facility requirements must be met:

- (1) Each unit must be appropriately equipped to enable individuals to remain current, proficient and capable of supplying an acceptable service;
- (2) all persons involved with the provision of service must be fully conversant with current ICAO standards and recommended practices, instructions, directives and relevant information; and
- (3) the working environment must be conducive to providing the service consistent with reasonable expectation and demand, by making the necessary facilities available to the personnel.

##### **2. Records**

Records must be maintained on the following:

- (1) Regular reports and returns to the DCA;
- (2) local incidents with remedial actions;
- (3) personnel files including supervisory reports;
- (4) training files;
- (5) licence and medical validity details;
- (6) minutes of staff meetings, aerodrome maintenance, bird control, emergency planning and other committee meetings;
- (7) rosters and roster keys; and
- (8) leave records.

**3. General equipment**

The facility must have -

- (1) the means to monitor the emergency frequency 121.5 MHz independent of mains and standby radio equipment;
- (2) emergency lighting;
- (3) notice boards;
- (4) head sets;
- (5) lockers and a safe;
- (6) emergency exits;
- (7) lightning protection; and
- (8) fire alarm.

**4. Accommodation**

The facility must have -

- (1) a briefing room;
- (2) equipment repair space;
- (3) technical equipment storage room;
- (4) toilet facilities;
- (5) running water; and
- (6) entry control.

**5. Aerodrome control**

- (1) The tower must permit the controller to survey those portions of the aerodrome and its vicinity over which control is exercised.
- (2) The tower must be equipped so as to permit the controller rapid and reliable communications with aircraft with which he or she is concerned.
- (3) The controller must be able to discriminate between aircraft and vehicles while they are on the same or different runways/taxiways.

**6. Aerodrome control tower**

An aerodrome control tower must have -

- (1) headsets;
- (2) microphones;
- (3) transceivers;
- (4) speakers;
- (5) radio selector panel;

- (6) telephone selector panel / handsets;
- (7) intercom;
- (8) auto-switch headset / speaker;
- (9) recorder (radio and telephone) where applicable;
- (10) power;
- (11) back-up power;
- (12) signal lamp;
- (13) wind speed and direction display;
- (14) barometric altimeter;
- (15) altimeter setting indicator;
- (16) clock;
- (17) aerodrome lighting panel;
- (18) navaid(s) monitor panel;
- (19) lighting, including emergency lights;
- (20) daylight radar/display consoles, as appropriate;
- (21) flight data panel, flight progress strip card holders and flight progress strip cards;
- (22) clipboards/displays (NOTAM etc.);
- (23) automatic terminal information system recorder where applicable;
- (24) fire alarm and extinguishers;
- (25) desks/consoles/shelves;
- (26) chairs;
- (27) shades;
- (28) air conditioning, heating / cooling;
- (29) binoculars; and
- (30) sound-absorbing coverings (floor/wall).

#### **7. Aerodrome/approach combined service**

An aerodrome/approach combined service must, in addition to the above the requirements as specified for an approach service, have -

- (1) headsets;
- (2) microphones;
- (3) transceivers;

- (4) speakers;
- (5) radio selector panel;
- (6) telephone selector panel / handsets;
- (7) intercom;
- (8) auto-switch headset / speaker;
- (9) recorder (radio and telephone);
- (10) power;
- (11) back-up power;
- (12) wind speed and direction display;
- (13) altimeter setting indicator;
- (14) clock;
- (15) navaid(s) monitor panel;
- (16) lighting, including emergency lights;
- (17) radar displays, controls, consoles, as appropriate;
- (18) secondary radar controls, as appropriate;
- (19) radar simulator, as appropriate;
- (20) flight data panel, flight progress strip card holders and flight progress strip cards;
- (21) automation equipment, if required;
- (22) clipboards/displays (NOTAM etc.);
- (23) automatic terminal information system recorder;
- (24) fire alarm and extinguishers;
- (25) desks/consoles/shelves;
- (26) chairs;
- (27) air conditioning, heating / cooling;
- (28) sound-absorbing coverings (floor/wall);
- (29) plotting and writing area;
- (30) navigation plotting equipment; and
- (31) aeronautical fixed telecommunication network.

**172.03.4 FACILITY REQUIREMENTS****8. An area control centre and flight information centre**

An area control centre (ACC) and a flight information centre must have

- (1) writing area / counter space;
- (2) plotting table;
- (3) navigation plotting equipment;
- (4) large-scale area map;
- (5) headsets;
- (6) microphones;
- (7) speakers;
- (8) radio communications selector panels;
- (9) telephones and selector panels;
- (10) aeronautical fixed telecommunications network;
- (11) access to direction-finding equipment;
- (12) flight progress console and equipment;
- (13) clocks;
- (14) lighting including emergency lighting;
- (15) chairs;
- (16) storage for reference documents;
- (17) lavatory;
- (18) running water;
- (19) fire alarm and extinguisher;
- (20) air conditioning heating / cooling;
- (21) power; and
- (22) back-up power.

**172.03.5 APPLICATION FOR APPROVAL OR AMENDMENT THEREOF****1. Application form**

The application form for the issuing of an air traffic service unit approval, or an amendment thereof, is contained in Annexure B.



**172.03.6 ISSUING OF APPROVAL****1. Form of air traffic service unit approval**

An air traffic service unit approval is issued on the form contained in Annexure C.

**172.03.9 RENEWAL OF APPROVAL****1. Renewal of air traffic service unit approval**

The application form for the renewal of an air traffic service unit approval is contained in Annexure B.

**172.03.12 DUTIES OF HOLDER OF APPROVAL****1. Procedures for the provision of services**

(Reserved.)

**2. En route facility financial data**

The holder of an approval must provide the Director with en route facility financial data in the form contained in Annexure D.

**3. En route facility traffic statistics**

The holder of an approval must provide the Director with en route facility traffic statistics in the form contained in Annexure E.

**4. Air traffic control instructions**

(Reserved.)

**5. Accident and incident procedures**

When receiving an accident or incident notification in terms of Part 12, the air traffic service unit must follow the following procedures:

- (1) Air traffic service incident check list
  - (a) Stay calm.
  - (b) Record details in writing, even if on scrap paper, as this will serve to accurately summarise into the appropriate log.
  - (c) Note times, names, callsigns and sequence of events.
  - (d) Identify type of incident and initiate relevant procedure.
  - (e) Notify all concerned persons and agencies.
  - (f) Ensure correctly addressed signal action and reporting.
- (2) Minor incidents e.g. go arounds
  - (a) Report to supervisor or officer-in-charge.
  - (b) Log incident.
  - (c) Complete incident form accurately and dispatch.

- (3) Major incident e.g. engine failures, hydraulic and other aircraft failures, bomb scares
  - (a) Report to supervisor or officer-in-charge.
  - (b) Inform fire fighting and rescue services, if appropriate.
  - (c) Inform aerodrome manager, if local to aerodrome.
  - (d) Inform operator.
  - (e) Inform ground handling agent if handling required, e.g. tug to tow aircraft, with hydraulic failure, off the runway.
  - (f) Impound tapes, ensuring times, details, callsigns and names are included.
  - (g) Complete incident form and present to supervisor or officer-in-charge for dispatch.
  - (h) Log incident with all relevant data, e.g. meteorological conditions.
  - (i) The aeronautical rescue coordination centre (ARCC) is to be alerted if the incident constitutes a possible search and rescue operation.
- (4) SAR action
  - (a) Inform supervisor or officer-in-charge.
  - (b) Inform operator.
  - (c) Alert the ARCC.
  - (d) Complete and dispatch a search and rescue (SAR) form giving details of progress in respect of telephonic search.
  - (e) Retain all relevant flight plans, departure and weather reports.
- (5) Accidents - assuming immediate SAR action already taken
  - (a) Inform supervisor or officer-in-charge.
  - (b) Inform accident investigator and the Director.
  - (c) Alert the Namibian Police who has to guard the wreckage until released by the investigator-in-charge.
  - (d) Inform operator.
  - (e) Inform aerodrome manager if local to an aerodrome or if destination or departure was an aerodrome.
  - (f) Impound tapes and relevant documentation.
  - (g) Complete and dispatch reports and accident forms.
- (6) Missile or hijack related incidents
  - (a) Comply with checks and major incidents.
  - (b) Alert security forces.

(c) Alert the Director.

(7) Code words

When passing a message via channels not secured, e.g. paper or radio, it is necessary to transmit the level of urgency without attracting attention. The following codes are to be quoted instead of plain language explanation.

Those codes may also be used by certain aircraft when trying to convey a message without wishing to use plain language.

Category followed by call sign:

Category A	:	Hijack alert (specific);
Category B	:	Hijack alert (non-specific);
Category C	:	Bomb warning;
Category D	:	Bomb found;
Category E	:	Actual hijack;
Category F	:	Missile alert;
Category G	:	Missile strike;
Category H	:	Attach/threat to offices and installations;
Category I	:	Notifiable incident;
Category J	:	Minor accident (up to injuries);
Category K	:	Major accident (fatalities);
Category L	:	Disastrous accident (100% fatalities);
Category M	:	Any of the above situations outside Namibia, of, in or to a Namibian registered aircraft; and
Category N	:	Overdue or search and rescue related.

## 6. Investigation of air traffic service incidents

The air traffic service incident reporting form is contained in Annexure F.

### 172.03.13 STATION STANDING INSTRUCTIONS MANUAL

#### 1. General

The station standing instructions (SSI) Manual must not be seen in isolation but rather as the document necessary to provide the interface between peculiarities of a particular unit and the various source documents, and does not negate air traffic service personnel from the responsibility of being familiar with and the application of procedures laid down in the following documents:

- (1) Integrated Aeronautical Information Package; (AIP, supplements, AIC's NOTAM);
- (2) Aviation Act, 1962;

- (3) Civil Aviation Regulations, 1999 -
  - (a) Part 139;
  - (b) Subpart 06 of Part 91;
  - (c) Part 12;
  - (d) Part 92; and
  - (e) Part 172;
- (4) Air traffic control instructions manual, approved, authorised, published and amended by the DCA;
- (5) the manual of procedure; and
- (6) relevant documents, manuals and annexes published by ICAO.

## 7. Contents

An SSI manual must contain the following:

- (1) Detailed unit operational procedures and requirements;
- (2) detailed unit administrative requirements, including the responsibilities of each operating position;
- (3) amplification and / or explanation of provisions of the national requirements, where necessary;

**Notes:** *1. In the construction of an SSI manual, relevant instructions contained in other readily accessible documents should only be referred to and not repeated in order to avoid the need to amend the SSI manual every time the quoted instructions are changed.*

*2. Specific terminology should be indicated to differentiate between mandatory, recommended and optional application of the relevant provision and other terminology and abbreviations should conform to those used in other relevant official documents.*

## 2. Preparation

A SSI manual is prepared under the direction of the officer-in-charge of the unit, and must be verified by the person responsible for the service e.g. the manager of the flight information region.

## 3. Amendments

- (1) Amendments to the SSI manual should be recorded in the document itself and brought to the attention of all concerned.
- (2) Air traffic controllers are required to indicate, in the appropriate manner, that an amendment has been noted.
- (3) Any amendments by hand must be accompanied by the designated person's signature and date. Designated person means any air traffic controller designated by his or her manager to make the relevant amendment by hand. Notice of these amendments must be transmitted to the head office responsible for the relevant service for ratification.

#### 4. Format

The format must be as follows:

- (1) Station standing instructions must be constructed in A4 size within a file for protection, easy access and amending.
- (2) The document must be divided into eight parts constituting:
  - (a) Part 1 : Preface (Introduction).
  - (b) Part 2 : Amendment check lists.
  - (c) Part 3 : General (non operational).
  - (d) Part 4 : General Operating Procedures.
  - (e) Part 5 : Special Operating Procedures e.g. low visibility procedures.
  - (f) Part 6 : Training / Standards.
  - (g) Part 7 : Emergency Procedures including checklists.
  - (h) Part 8 : Appendices.

*Note: An index or table of content should precede Part 1 for easy reference.*

- (3) Each part contains sections which can be broken down into sub-sections, for example:

#### 172.03.13 STATION STANDING INSTRUCTIONS MANUAL

<p>PART II</p> <p>SECTION 7</p> <p>RESTRICTION OF INBOUND TRAFFIC FLOW INTO NAMIBIA'S FLIGHT INFORMATION REGIONS AND/OR TERMINAL CONTROL AREAS</p> <p>7.1 <u>INTRODUCTION</u></p> <p>The Approach SSI (Part II, Section 4) make provision for Flow Control Restrictions in respect of flights departing a terminal control area (TMA).</p> <p>Traffic density situations (or downgraded non-radar equipment) may, however, necessitate the imposition of restrictions to inbound traffic flows into the flight information region (FIR) or TMA.</p> <p>The approach controller may find it necessary to impose restrictions to the inbound traffic flow. In such cases, the following procedures are to be complied with:</p> <p>7.2 <u>APPROACH CONTROL: - RESTRICTING THE FLOW OF INBOUND TRAFFIC INTO A TMA.</u></p> <p>7.2.1 RESPONSIBLE CONTROLLER</p> <p>When considered necessary by approach control, any approach controller will inform the aeronautical rescue coordination centre (ARCC) that the flow of air traffic into the TMA is being restricted.</p>
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**7.2.2 PROCEDURE**

Once the approach executive has informed the ARCC that the flow of inbound traffic into the TMA is being restricted, the approach executive is required to do the following:-

- (i) Instruct the ARCC to activate the holding stacks at the TMA entry points;
- (ii) Request the ARCC to send a FLOW RESTRICTION MESSAGE, giving (a) the anticipated length of delays in the TMA entry holding stacks and (b) the onward clearance time for aircraft required to hold where an aircraft is to hold in excess of 10 minutes.
- (iii) Inform any air traffic service unit within Namibia's FIR that will be affected by the restriction.

**Note:** *The aforementioned information is for the purpose of example only and may not be current.*

- (4) Page numbering must indicate Part, section, page and date included. e.g. 2-3-10-4/96 where the 2 = Part, - 3 = section, - 10 = Page and relevant as from April 2000.
- (5) Provision must be made in the preface for signature of the compiler, (normally the officer in charge of the unit).

**172.03.14 DOCUMENTATION****1. Documentation**

The following documentation must be available in an air traffic service unit:

- (1) Procedures manual;
- (2) air traffic control instructions manual;
- (3) station standing instructions manual;
- (4) AIP and AIP Supplements;
- (5) AIC's and NOTAM;
- (6) Civil Aviation Regulations, 2001;
- (7) Namibian Search and Rescue (NASAR) Manual, issued by the DCA;
- (8) aerodrome emergency plan, where applicable;
- (9) directives and instructions file;
- (10) occurrence logs;
- (11) unserviceability logs;
- (12) circulars and bulletins file;
- (13) equipment manuals;

- (14) technical standards and practices; and
- (15) all applicable ICAO documents.

### **172.03.15 INTERNAL INSPECTION**

#### **1. Internal inspections**

The following must be periodically inspected:

- (1) Documentation available (current):
  - (a) Procedures manual;
  - (b) air traffic control instructions manual;
  - (c) station standing instructions manual;
  - (d) AIP and AIP supplements;
  - (e) NOTAM;
  - (f) Civil Aviation Regulations, 2001;
  - (g) NASAR manual;
  - (h) aerodrome emergency plan;
  - (i) air traffic service unit emergency plan;
  - (j) directives;
  - (k) personnel files (supervisors reports);
  - (l) statistics;
  - (m) occurrence log;
  - (n) rosters and roster keys;
  - (o) responsibilities for amendments or originating alterations; and
  - (p) formal procedure for keeping personnel up to date with amendments.
- (2) Organisation:
  - (a) Current unit organisational chart and written delegated responsibilities;
  - (b) man-loading of positions;
  - (c) designated instructors and standards officers;
  - (d) system for coordinating; and
  - (e) staffing of unit.
- (3) Planning for quality:

Staff planning / deployment.

(4) Statistics:

- (a) Regular returns made to the DCA;
- (b) local analysis and use of statistical returns;
- (c) filing of incidents; and
- (d) implementation of corrective actions based on statistics.

(5) Non-conformance / corrective actions:

The number of defects over the previous 12 months within the following areas:

- (a) Equipment;
- (b) materials;
- (c) personnel;
- (d) training;
- (e) documentation of system defects;
- (f) procedures used to resolve defect problems; and
- (g) analysis of complaints.

(6) Records:

- (a) Validation and standards check details;
- (b) training files;
- (c) leave records;
- (d) traceability of records; and
- (e) regular reviewing of records.

(7) Service safety:

- (a) General knowledge level of own environment;
- (b) involvement in committees for aerodrome emergency planning, bird control and aerodrome maintenance - minutes;
- (c) frequency of emergency exercises;
- (d) documentation of local contingency planning;
- (e) monitoring of 121.5 MHz;
- (f) processes associated with search and rescue; and
- (g) emergency checklist and categories.



- (8) Radar and general air traffic control application:
  - (a) Areas of responsibility;
  - (b) how often is radar actually used for separation;
  - (c) how often is radar actually used for navigation, clear of terrain or weather;
  - (d) radar monitoring;
  - (e) radar transfers;
  - (f) establishment of identity; and
  - (g) specific separation standards used (non radar).
- (9) Miscellaneous:
  - (a) Regularity of staff meetings; and
  - (b) licence validity monitoring.
- (10) General:
  - (a) Basic hygiene requirements;
  - (b) supply of traffic information;
  - (c) general knowledge of special procedures, events or airspaces;
  - (d) ambient noise levels;
  - (e) aerodrome lighting panel;
  - (f) meteorological instrumentation; and
  - (g) aeronautical terminal information system.

### **172.03.16 AIR TRAFFIC CONTROL CLEARANCES**

#### **1. Contents**

- (1) Air traffic control clearances must contain -
  - (a) aircraft identification;
  - (b) clearance limit;
  - (c) route of flight; and
  - (d) level(s) of flight for the route or part thereof and changes of levels if required;
  - (e) any necessary instructions or information on other matters such as SSR transponder operations; and
  - (f) approach or departure manoeuvres, communications and time of expiry of the clearance.

- (2) Instructions instituted in clearances to levels must consist of -
  - (a) cruising level(s) or, for cruise climb, a range of levels, and, if necessary, the point to which the clearance is valid with regard to the level(s);
  - (b) levels at which specified significant point are to be crossed, when necessary;
  - (c) the place or time for starting climb or decent, when necessary;
  - (d) the rate of climb or decent, where necessary; and
  - (e) detailed instructions concerning departure of approach levels, when necessary.

### **172.03.18 TRANSFER OF RESPONSIBILITY FOR CONTROL**

#### **1. Transfer of responsibility for control**

Where units are providing services adjacent to areas serviced by other units a letter of procedure must be compiled between the units in accordance with the format contained in Annexure G.

### **172.04.1 ESTABLISHMENT AND PROVISION OF SEARCH AND RESCUE SERVICES**

#### **1. Designation**

Namibia is divided into two search and rescue regions:

- (1) The aeronautical region which covers the land area of the sovereign territory of the Republic of South Africa, Swaziland, Lesotho, Namibia and the area defined by the ICAO AFI Plan; and
- (2) the maritime region which covers the sea area bordering the land area mentioned above and defined in the NAMAR Manual.

An aeronautical rescue coordinating centre (ARCC) may delegate its authority to another ARCC for a portion or entire SRR should a situation exist where, in the opinion of the Chief of the ARCC, this would be more practical.

#### **2. Requirements**

(Reserved.)

### **172.04.2 SEARCH AND RESCUE ACTION**

#### **1. Rescue coordination centre**

- (1) The RCC chief is the person in charge of an aeronautical rescue coordination centre (ARCC).
- (2) The RCC chief must ensure that -
  - (a) the ARCC is established;
  - (b) it is properly manned;
  - (c) persons designated and on call or standby to act as search mission coordinators (SMCs) when required, are appointed;

- (d) SMCs are appointed for specific search and rescue operations;
- (e) the ARCC conforms to the SAR procedures that have been established;
- (f) the ARCC establishes close liaison with the persons in charge of the facilities available to the ARCC by holding operational meetings;
- (g) a communication network is established for the conduct of a search and rescue operation within the area of responsibility of the ARCC; and
- (h) where applicable, liaison is established with other search and rescue facilities of neighbouring states to ensure mutual cooperation during combined operations.

## **2. Search and rescue plan**

### **2.1 General**

- (1) A search and rescue plan (SAR plan) is unique to a particular ARCC or rescue subcentre (RSC). Each ARCC chief or RSC head must therefore ensure that the ARCC or RSC concerned has a comprehensive and detailed SAR plan to ensure that the ARCC or RSC functions properly during a search and rescue action.
- (2) All search and rescue action must be undertaken according to the SAR plan.
- (3) The SAR plan must be unambiguous and the ARCC or RSC must be able to carry out the instructions.
- (4) Air traffic service units (ATSU) must automatically institute search and rescue operations as defined herein and by local operating procedures, until relieved by the AARCC.

### **2.2 Contents**

A SAR plan must -

- (1) set out the procedure whereby a search and rescue operation in the ARCCs and RSCs area of responsibility should be conducted during the different phases of emergency;
- (2) in respect of facilities available to the ARCC or RSC -
  - (a) state precisely which agencies are responsible for activating facilities;
  - (b) detail the methods of communicating with the various agencies (communication network);
  - (c) detail the methods of alerting mobile facilities;
  - (d) detail the methods of coordination with the various facilities;
  - (e) indicate by whom, and to what extent, any of these facilities can be requested to participate in an operation; and
  - (f) describe the facilities available to the ARCC or RSC;
- (3) state precisely the area of responsibility appertaining to the ARCC or RSC;

- (4) state the responsibilities of staff assigned to search and rescue operations;
- (5) set out the method and procedure whereby information is obtained, stored and retrieved for use in a search and rescue operation;
- (6) make provision for the training and exercising of search and rescue staff; and
- (7) set out a reporting procedure whereby the hydrographer of the Ministry of Defence is informed of any hazard to navigation or wreck, consequent to operation.

#### **172.04.2 SEARCH AND RESCUE ACTION**

### **3. Alerting post**

- (1) The alerting post must alert the ARCC or RSC of an emergency or a potential emergency.
- (2) Alerts could be received from any source but essentially from -
  - (a) the master or person in charge of a vessel;
  - (b) the pilot of an aircraft;
  - (c) an air traffic service unit;
  - (d) a coastal radio station;
  - (e) a police officer;
  - (f) an ARCC of another government;
  - (g) the marine rescue coordination centre (MRCC) or ARCC;
  - (h) an officer of the watch of a vessel sighting a distress signal;
  - (i) a duty officer in a port control tower; or
  - (j) a safety officer of a power boat club.
- (3) Dedicated alerting posts must be manned 24 hours a day and are -
  - (a) air traffic service units;
  - (b) port control offices;
  - (c) coastal radio stations;
  - (d) Namibian police stations;
  - (e) the MRCC; and
  - (f) the ARCC.
- (4) Procedure to be followed by an alerting post

A dedicated alerting post must, on becoming aware of an emergency or potential emergency, gather as much information about the emergency as is possible. Once the information is gathered, it must make a report to the

nearest Port Captain (RSC) in the event of a marine emergency or to the nearest ATSU in the event of an inland emergency.

After making the initial report, the alerting post must make an attempt to check the report for authenticity and accuracy. If the alerting post suspects that the message or signal indicating the emergency is a hoax, it must declare it so.

It must keep open the channel of communication between the alerting post and the source of the emergency message until the ARCC declares that it is no longer required.

(5) Gathering of information by an alerting post

A dedicated alerting post should attempt to gather the following information for passing on to the ARCC or RSC:

- (a) Air and marine craft incident data:
- (i) Distressed craft identification (name or type/call sign);
  - (ii) position of emergency (latitude/longitude or bearing/distance from known position or last reported position and next reporting position);
  - (iii) date/time of position;
  - (iv) nature of emergency (fire, collision, man overboard, disable, overdue, bail-out, crash);
  - (v) craft description (size, type, hull colour, cabin colour, deck colour, rigging, fuselage colour, tail colour, wingtip colour);
  - (vi) persons on board;
  - (vii) date, time and point of departure, planned route, speed of advance estimated time of arrival (ETA) and point of destination;
  - (viii) radio frequencies in use, monitored or scheduled;
  - (ix) emergency radio equipment and frequencies, including emergency position indicating radio beacon;
  - (x) on-scene weather and sea conditions;
  - (xi) assistance desired, if not obvious.
  - (xii) assistance being received, if any;
  - (xiii) heading, speed, altitude and fuel;
  - (xiv) initial reporter (name, telephone or address of person, name/call-sign if craft, parent agency);
  - (xv) date and time of initial report;
  - (xvi) possible route deviations;

- (xvii) navigation equipment;
  - (xviii) survival equipment;
  - (xix) other information, sources (friends, relatives, associates, agents and agencies);
  - (xx) car/boat trailer licence, description, location, if pertinent; and
  - (xxi) any other pertinent information.
- (b) Lost person incident data:
- (i) Name of missing person;
  - (ii) location last seen;
  - (iii) date/time last seen;
  - (iv) known intentions or possible actions of missing person;
  - (v) description of missing person;
  - (vi) clothing, footwear and equipment;
  - (vii) physical and mental condition;
  - (viii) knowledge of area;
  - (ix) outdoor experience;
  - (x) weather conditions;
  - (xi) action being taken;
  - (xii) assistance desired, if not obvious;
  - (xiii) initial reporter (name and telephone number or address);
  - (xiv) date and time of initial report;
  - (xv) next of kin (name and telephone number or address); and
  - (xvi) any other pertinent information.

(6) Weather information

Whenever an incident is reported, the individual who did the reporting should be questioned in detail on the existing weather conditions. Even though the information obtained may not be completely accurate it will give an indication of the weather that can be encountered by the search craft and that experienced by the distressed craft. This can be of considerable assistance when tasking missions to remote areas. The reporter should specially be questioned on the following:

- (a) Clear skies or cloudy weather and recent changes;
- (b) cloud ceiling, cloud type and percentage cover;
- (c) whether rain or snow is falling or has fallen, when the snowfall started and ended;

- (d) whether severe weather such as thunderstorms, hail, ice pellets or freezing rain are occurring or have occurred, and at what times it started and stopped;
- (e) visibility and any factors affecting it such as fog, smoke, haze, etc, and the time of any recent changes;
- (f) the state of the water surface, if applicable; and
- (g) wind direction and velocity and recent changes.

#### **4. Communications**

##### **4.1 General**

Search and rescue operations is reliant on communications between two or more of the following units or organisations:

- (1) Air traffic service units;
- (2) search and rescue aircraft;
- (3) search and rescue vessels;
- (4) other vessels at sea;
- (5) air force bases and command posts;
- (6) naval shore authorities;
- (7) port authorities;
- (8) rescue and coordination centres;
- (9) coastal radio stations;
- (10) police stations, vessels and vehicles;
- (11) SRIN land stations, land mobile stations and vessels;
- (12) lighthouses; and
- (13) emergency medical services.

##### **4.2 Communication frequencies**

- (1) Search and rescue aircraft operating in maritime areas must be equipped with 2 182 kHz and/or 156,8 MHz (Channel 16).
- (2) The frequency 156,0 MHz (VHF Channel 0) is allocated by Telecom Namibia as a marine on-scene frequency.
- (3) The other available frequencies are listed below:
  - (a) Frequencies available for inter-communication between units engaged in search and rescue operations are -

- (i) 3 023 kHz (RT) -  
the International Telecommunication Union allocation is 3023 ITU Article 38-3, regulation 2980 refers. Used between ships/ships and ships/aircraft;
- (ii) 123,1 MHz (RT) International -  
used between aircraft/aircraft; and
- (iii) 156,3 MHz (RT) VHF channel 06 International -  
used between ships/ships and ships/aircraft.

**Notes:** *1. If a SAR operation is taking place in controlled or advisory airspace, the published aeronautical frequency must be used or monitored for ATC purposes.*

*3. When a SAR operation is declared, a frequency is allocated for aircraft/aircraft communication.*

*4. The frequency 156,0 MHz (VHF Channel 0) allocated to the SRIN for internal use is not available on board all ship stations and aircraft stations who should use 156,3 MHz (channel 06) for coordinated SAR communications. Ship stations must avoid harmful interference to such communications on channel 06.*

- (b) International distress frequencies are -
  - (i) 500 kHz (WT) International Marine Emergency;
  - (ii) 2 182 kHz (RT) International Marine Emergency;
  - (ii) 121,5 MHz Emergency Position Indicating Radio Beacons on board ship stations;
  - (iv) 156, 8 MHz (RT) International Marine Emergency (VHF Channel 16); and
  - (v) 243 MHz Aeronautical Emergency.

#### 4.3 The aeronautical search and rescue operation

##### (1) Uncertainty phase

An uncertainty phase is declared by an air traffic service unit -

- (a) in respect of an aircraft for which a flight plan has been filed, when -
  - (i) no communication has been received within a period of 30 minutes after the time it should have been received, or from the time a first unsuccessful attempt was made to establish communication with the aircraft, whichever is the earlier;
  - (ii) the aircraft fails to arrive within 30 minutes of the ETA last notified or estimated, whichever is the later; or



- (iii) the evaluation of other circumstances, e.g. knowledge that the aircraft is experiencing difficulties, renders it advisable to declare the uncertainty phase; and
- (b) in respect of an aircraft for which no flight plan has been filed, when information that the aircraft is overdue or missing is received from any source, e.g. an air traffic service unit, the aircraft operator, relatives of the pilot, or any other person.

In such cases the ARCC will be notified and will monitor the progress

(2) Alert phase

- (a) An alert phase is declared by an ACC or ARCC when -
  - (i) the attempts made during the uncertainty phase to establish contact with the aircraft or to gain any news from other sources have failed and the aircraft is clearly overdue;
  - (ii) an aircraft which has been cleared to land has failed to land within 5 minutes of the estimated time of landing and communications have not been re-established with the aircraft;
  - (iii) information has been received which indicates that the operating efficiency of the aircraft for which the uncertainty phase was declared or that of another aircraft has become impaired, but not to the extent that a forced landing is likely;
  - (iv) there is reason to believe that the operation of an aircraft is being interfered with.
- (b) In such cases the ARCC will be informed, who in turn, will continue with the alerting of relevant and related organisations and authorities.

(3) Distress phase

- (a) A distress phase is declared when -
  - (i) attempts made during the alert phase to establish contact with the aircraft and to gain information through more widespread enquiries have failed and the aircraft is clearly missing and probably in distress;
  - (ii) the fuel on board is considered exhausted or insufficient for the aircraft to reach safety;
  - (iii) information is received which indicates that the operating efficiency of the aircraft has become impaired to the extent that a forced landing is likely; and
  - (iv) information is received, or it is reasonably certain that the aircraft is about to make or has made a forced landing, or has crashed.
- (b) The ARCC will be informed and the ARCC must notify and activate required agencies and authorities. When a distress situation exists without the activation of the ARCC, the relevant air traffic service unit will mobilise appropriate resources.
- (c) Each ATSU is entrusted with the task of alerting services for all aircraft known to it, whether the aircraft is provided with air traffic services or not.

- (d) Each ACC serves as a collecting point of all information relating to the state of emergency of an aircraft operating within the FIR concerned and the conducting of search and rescue operations until relieved by the ARCC.
  - (e) An ARCC will usually receive notification that an aircraft is, or is considered to be, in a state of emergency from the ACC with which it is associated.
  - (f) The ARCC will not normally be informed, however, when the nature of the emergency is such that local rescue facilities are considered to be capable of dealing with the emergency, e.g. in certain incidents occurring at or near an aerodrome.
- (4) Notification from an ATSU to an ARCC will contain, as available, the following information in the order listed:
- (a) INCERFA, ALERFA or DETRESFA, as appropriate to the phase of emergency;
  - (b) agency and person calling;
  - (c) nature of emergency;
  - (d) significant information from the flight plan;
  - (e) time of last communication, by whom received and frequency used;
  - (f) last position report and how determined;
  - (g) colour and distinctive marks of aircraft;
  - (h) any action taken by reporting officer; and
  - (i) other information.
- (5) The aeronautical search and rescue operation sequence of events
- (a) The uncertainty phase (INCERFA) may be declared by an air traffic service unit or by the ARCC
    - (i) Upon the occurrence of an INCERFA the air traffic service unit should -
      - X verify the information received, if necessary;
      - X when a flight plan has been filed, maintain close liaison with the relevant air traffic service unit so that -
        - B new information obtained through a communication search, a verification of the flight plan and a review of the weather information passed to the pilot before and during the flight will be available immediately for evaluation, plotting and decision-making;
        - B duplication of action can be avoided since this may lead to unnecessary overloading of communication channels;

- X when no flight plan has been filed, attempt to obtain information from which the route, stopping places and time of departures and arrivals of the aircraft may be reconstructed; and
  - X start a plot of the flight of the aircraft involved using relevant information obtained by the action above.
- (ii) The purpose of a communication search is twofold, namely -
- X continuation of efforts to contact aircraft on all appropriate frequencies; and if that fails -
  - X determination of its probably whereabouts by -
    - B making enquiries at all aerodromes where it might have landed, including the aerodrome of departure; and
    - B contacting other appropriate sources, such as aircraft known or believed to be on the same route or within communication range.
- (iii) If the communication search or flight reconstruction indicates that the aircraft has landed safely, the air traffic service unit will close the incident and immediately inform the ARCC, operating agency and any facility it has alerted.
- (iv) If, however, apprehension as to the safety of the aircraft and its occupants continues to exist, the uncertainty phase must be upgraded to the alert phase.
- (b) The alert phase (ALFERFA) will be declared by the ACC or the ARCC
- (i) Upon the occurrence of an ALERFA the ARCC should -
- X immediately appoint an SMC, and alert other staff and appropriate search and rescue facilities as necessary;
  - X enter in a log all incoming information and progress reports, details of action as described below and subsequent developments;
  - X verify the information received, if necessary;
  - X endeavour to obtain any information concerning the aircraft from sources the air traffic services might not have checked through their normal communication circuit, such as-
    - B communication stations associated with radio navigation aids, radar facilities or direction finding net-works, and any other communication stations with which the aircraft might have communicated (these units should be requested to guard specified radio frequencies);
    - B all aerodromes or landing strips along the proposed route of the aircraft which have not yet been checked, as well as all others where it is reasonably possible that the aircraft may have landed;

- B all other agencies and facilities capable of obtaining additional information or verifying information on hand, i.e. all those agencies which have been included in the plan and may be called upon for assistance;
  - X thoroughly evaluate the flight plan, weather, terrain, possible communication delays, last known position, last radio calls received and operator's qualifications;
  - X estimate the time of fuel exhaustion and particularly note the performance of the aircraft under adverse conditions;
  - X maintain close liaison with the relevant air traffic service units so that new information obtained through continued attempts to contact the aircraft or through more widespread enquiries can be made available immediately for evaluation, plotting and decision-making;
  - X when requested to do so, the air traffic service unit may assist by -
    - B providing communication facilities, in particular by passing instructions or information to the aircraft in distress, aircraft reporting the distress or search aircraft;
    - B informing other aircraft operating in the vicinity of the nature of the emergency;
    - B monitoring, and keeping the ARCC informed on the progress of any aircraft, the efficiency of which has been impaired but not to the extent that a forced landing is likely;
  - X plot relevant details obtained through the action described above to determine the probable position of the aircraft and its maximum range of action from its last known position;
  - X initiate search and rescue action, if so indicated by the situation appraisal, and notify any action taken to the ACC for onward relay to the aircraft, if possible; and
  - X whenever practicable, communicate to the operating agency all information received and action taken.
- (ii) Normally an area of probability would be calculated at this stage to be upgraded to a search area during the distress phase.
- (iii) If the efforts to locate the aircraft indicate that the emergency no longer exists, the ARCC will close the incident and immediately inform the operating agency and any centre, service or facility it has alerted or activated.
- (iv) If, however, the aircraft has not been located by the time all efforts have been completed or the time of estimated fuel exhaustion has been reached, whichever occurs first, and thus the aircraft and its occupants may be considered to be in grave and imminent danger and in need of immediate assistance, the alert phase must be upgraded to the distress phase.

- (c) The distress phase (DETRESFA) may be declared by an ACC or the ARCC
- (i) Upon the occurrence of a distress phase the ARCC under the guidance of the search and rescue mission coordinator should -
- X examine the appropriate part of the detailed plan of operations for search and rescue in the SRR;
  - X decide on a plan of action and pass relevant details of the plan to -
    - B the ACC for onward transmission to the aircraft, if and when possible, or for traffic coordination purposes including appropriate NOTAM action; and
    - B all ARCCs associated with the planned route of the aircraft, as well as those whose SRRs lie within the radius of action of the aircraft as determined from its last known position;
  - X direct the operation expeditiously and efficiently until its conclusion, and if necessary appoint an RSC, or on-scene commander (OSC) who will be responsible for the following:
    - B the RSC will fulfil the roles as delegated by the ARCC;
    - B the OSC will be responsible for -
      - B coordination of all other SAR efforts in the area of the particular SAR mission;
        - \* establishing communications with all SAR facilities within the assigned area and acting as a radio link between the ARCC and other SAR facilities in the area;
        - \* the re-transmission of position and other reports to the ARCC if necessary;
        - \* reporting weather and search conditions to the ARCC upon arrival at the scene of action, and keeping the ARCC fully advised of weather and other conditions and developments
        - \* ascertaining the endurance of SAR units within the area;
        - \* providing details of the mission to participating and to joining aircraft; and
        - \* submitting numbered sitreps to the ARCC periodically or when important changes occur;
  - X maintain close liaison with the relevant air traffic service unit so that

- B new information obtained through continued attempts to contact the aircraft or through widespread enquiries will be made available immediately for evaluation, plotting and decision-making;
- \* when requested to do so, the air traffic service unit may assist by -
  - \* providing communication facilities, in particular by passing instructions or information to the aircraft in distress, aircraft reporting the distress or search aircraft;
  - \* informing other aircraft operating in the vicinity of the nature of the emergency and, if need be, restricting normal operations in the search area outside controlled airspace; and
  - \* monitoring and keeping the ARCC informed of all relevant information.

- (d) The ARCC will notify the SAR secretariat of all search and rescue operations.

***Note: Where a friend, relative or business associate of a pilot or other person reports the non-arrival of an aircraft for which the prescribed flight plan was not submitted or for which a prescribed flight plan was submitted but in which it was stated that search and rescue action was not required, the matter must be referred to the Director who will decide what action is to be taken.***

(6) Aeronautical operational reporting and documentation

(a) General

(i) Introduction

The first responsibility of the relevant duty personnel is to identify incidents and take appropriate and prompt action, then to document and report what has been done, giving reasons or intention when appropriate.

(ii) Documentation

Documentation is the selection and recording of information and the events handled by the relevant duty personnel from initial incident awareness to the conclusion of the operation. It provides the basis of reports made during search and rescue operations and of subsequent reports and returns. It includes all data recorded, messages and signals received or transmitted by radio and telecommunications links, search planning forms, operation logs, charts and maps, and other recorded data.

(iii) Purpose of reports

Reports are required to:

- alert others who are, or may become, involved;

- inform those who should be aware of what is happening; and
- record events.

(iv) Urgency versus detail

A detailed report which arrives too late is useless. No report should be made without considering timeliness and how urgently the recipients need to be informed.

(v) Priority of signals

It is most difficult to judge the priority of signals alerting headquarters about major incidents that -

- X are of general interest to, or affect the DCA;
- X could have political, international, commercial or other repercussions.

In the case of major incidents that are of general interest, SMCs should try to ensure that the addressee is informed before the media broadcast the story. In the case of major incidents which could have political or other repercussions, addressees should be informed as soon as possible after the most urgent traffic has been cleared.

(b) Requests for military or civilian aircraft

All requests for military or civilian fixed-wing aircraft and helicopters for SAR and Medivac operations must be made to the nearest air force command post or aircraft operator. Especially, where immediate danger to life is involved, and the casualty is within about 30 miles of the aircraft base, requests for helicopter assistance may be made direct to the Air Force Base or civilian operator and informing the local air force command post or operators as soon as possible thereafter. As a matter of procedure the matter should be conveyed to the nearest ATSU.

(c) Completion of the aeronautical SAR reporting form and the aeronautical search operation briefing form (see Annexure H)

- (i) The priority indicator, DCA addresses and type of message are already entered and must not be altered. Other appropriate addresses must be added.
- (ii) Field 5 : Insert the phase declared, the six or eight letter designator of the unit compiling the message and a brief description of the nature of the emergency, e.g. number three engine feathered, position report not received, non-arrival at destination, etc.
- (iii) Field 7 to 19 : Copy from flight plan. In field 19 delete items such as emergency radio (RDO), frequencies, and survival equipment not carried on the aircraft and if appropriate insert details of the inflatable rafts carried.
- (iv) Field 20 : Insert appropriate information which is known, inserting the letters UNK or NA where the information is unknown or not applicable.

## (d) Transmission of the aeronautical SAR reporting form

Transmit all the items in the unshaded areas of the form down to the (A) at the end of field 20, including the printed items which have not been deleted and all brackets, hyphens, oblique strokes, spaces and line functions.

## (e) Debriefing

Each and every search and rescue operation must be followed by a debriefing of the events, and completion of the aeronautical search operation debriefing form contained in Annexure I.

TABLE 1: AIR TRAFFIC SERVICE 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	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (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
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
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 distance from 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 distance from cloud  At and below 900 m AMSL or 300 m 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 or 300 m 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 lieu of 10 000 ft.

\*\* When so prescribed by the appropriate ATS authority:

a) lower flight visibilities to 1 500 m may be permitted for flights operating:

- 1) at speeds that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
- 2) 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;

b) 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.



*Annexure A*

**WORK PERFORMANCE ASSESSMENT REPORT  
AIR TRAFFIC SERVICE PERSONNEL**

EVALUATOR: .....	EVALUEE: .....
UNIT: .....	UNIT: .....
PERIOD OF ASSESSMENT .....	FROM: ..... TO: .....
EVALUATOR'S SUPER IOR: .....	UNIT: .....

ETC.

PROFICIENCY ASSESSMENT: (standards check)		POSITIONS			
VALIDATION ASSESSMENT:		POSITIONS			
50 HOUR CHECK:					
MID TERM CHECK:		HOURS DUAL			
AD HOC ASSESSMENT		REQUESTED			
		CURRENT GRADE			
DATE OF ASSESSMENT NOTICE SERVICED:					

**ASSESSMENT SCALES**

Assessment is to take place in accordance with the following 5 point scale:

1. Unacceptable
2. Below average
3. Satisfactory
4. Very good
5. Excellent

A. ALL GRADINGS (marking relevant to grading requirements)

**1. General administration** (log keeping, registers, leave, forms, etc.)

EVALUEE	1	2	3	4	5
EVAUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**2. Knowledge and application of procedures** (ATCIs, SSIs directives, CARs etc.)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator’s comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**3. Operational administration** (Strip marking, reporting, INCREPS construction and decoding of messages, issuing of NOTAMs, statistics, etc.)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator’s comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**4. Relevant general knowledge** (area of responsibility, aerodrome layouts, airspace construction, local geography, routes, etc.)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator’s comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**5. Knowledge and control of relevant equipment** (Own equipment, nav aids, systems, etc.)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**6. Insight into pending problems and ability to plan ahead**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**7. Ability to cope with pressure** (consistency even with high work levels)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**8. Screen technique, phraseology and telephone manners**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**9. Taking, storing, processing and transmission of flight plans**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**10. Knowledge and interest of associated functions**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**11. Interaction with colleagues** (Team person, ability to impart knowledge and coaching of subordinates)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**12. Punctuality and interpretation of discipline and authority**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**B. ATSA'S AND ALL ATC GRADES**

**13. Level of confidence**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**14. Knowledge and application of standard instrument departures (SID's), standard arrivals (STAR's) and preferential ratings**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**15. Understanding and application of a safe, expeditious flow of air traffic**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
.....  
.....

EVALUEE	AGREES:	DISAGREES:
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**16. Knowledge of flow control and slot time application**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
.....  
.....

EVALUEE	AGREES:	DISAGREES:
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**17. Coordination and liaison-timing and technique**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
.....  
.....

EVALUEE	AGREES:	DISAGREES:
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**18. Ability to handle a busy situation**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
.....  
.....

EVALUEE	AGREES:	DISAGREES:
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**19. Knowledge of and handling capability of emergency and SAP situations**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**20. Passing of essential traffic information, aerodrome and oceanic**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**C. ALL ATC'S**

**21. Radar vectoring and/or associated procedures (Speeds, distances, and performances, etc.)**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**22. Overall "Non Radar" procedures and use of facilities**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**23. Understanding and application of complex ATC situations** (Parallel runway-operations, crossing runways and/or airways)

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**24. Use of standard published procedures**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**D. FOR ASSESSING CANDIDATES SUITABILITY INTO SUPERVISORY RANKS** (to be completed for all current senior and principal ATC's)

**25. Consistent exemplary conduct**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....  
 .....  
 .....

EVALUEE	AGREES:	DISAGREES:
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**26. Voluntarily puts in additional effort to ensure efficient operation of the unit**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**27. Attends relevant meetings (Bird control, aerodrome, maintenance, airlines, etc.)**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**28. Involved in unit management duties (Standards, operations, head specific committees, etc.)**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**29. Arranges unit visits, lectures and promotes the image of ATC**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**30. Actively involved in unit's morale building exercises**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**31. Has obtained additional relevant specialist knowledge (Construction of SID's and STAR's, flow control, ICAO SARPS, etc.)**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**32. Volunteers to cover additional operational duties due to staff or other emergencies**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**33. Accepted as a specialist ATC by colleagues and subordinates**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**34. Has an ability to defuse conflict situations and naturally takes the lead in relevant discussions**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
---------	---------	------------

**35. Convenes own meetings (Staff, operations, planning, etc.)**

EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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**36. Completes projects on time and accurately**

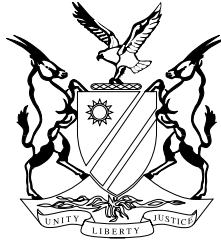
EVALUEE	1	2	3	4	5
EVALUATOR	1	2	3	4	5

Evaluator's comments: .....

.....

.....

EVALUEE	AGREES:	DISAGREES:
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*Annexure B*

**REPUBLIC OF NAMIBIA  
CIVIL AVIATION**

**APPLICATION FOR THE ISSUING OF AN AIR TRAFFIC SERVICE UNIT  
APPROVAL**

**APPLICATION FOR THE AMENDMENT OF AN AIR TRAFFIC SERVICE  
UNIT APPROVAL**

**APPLICATION FOR THE RENEWAL OF AN AIR TRAFFIC SERVICE UNIT  
APPROVAL**

**Notes:**

- (i) *An application for the issuing of an air traffic service unit approval, or an amendment thereof, must comply with the provisions of CAR 172.03.5.*
- (ii) *An application for the renewal of an air traffic service unit approval must comply with the provisions of CAR 172.03.9.*
- (iii) *Section 1 of this form must be completed in all cases.*
- (iv) *All other sections must be completed if applicable to the specific application.*
- (v) *The original application must be submitted to the Director: Civil Aviation.*
- (vi) *Where the required information cannot be furnished in the space provided, the information must be submitted as a separate memorandum and attached hereto.*
- (vii) *Please delete if not applicable.*

Mark the appropriate block:

- Application for the issuing of an air traffic service unit approval
- Application for the amendment of an air traffic service unit approval
- Application for the renewal of an air traffic service unit approval

**1. PARTICULARS REGARDING THE APPLICANT/HOLDER**

1.1	Full name: .....
	.....

1.2	Trade name: .....
	.....

1.3 Full business / residential address: ..... ..... ..... .....	1.4 Postal address: ..... ..... ..... Postal code .....
--	---

1.5 Telephone number: .....	1.6 Telefax number : .....
-----------------------------	----------------------------

1.7 Cellular phone number: .....	1.8 E-mail address : .....
----------------------------------	----------------------------

1.9 SITA code (if any): .....	1.10 Telex number : .....
-------------------------------	---------------------------

1.11 Legal status of applicant/holder (individual/close corporation/company/trust/other - specify): .....
---

1.12 Registration number in the case of a close corporation/company/trust: . .....
---

1.13 Full particulars in respect of the individual/each responsible director/shareholder/partner/member/office bearer:				
Name	Position	Identity Number	Nationality	Country of permanent residence
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

1.14 The applicant/holder declares hereby that the particulars provided in this application are true in every respect.	
..... Signature	..... Date

## 2. APPLICATION FOR AN AIR TRAFFIC SERVICE UNIT APPROVAL

2.1 Type of air traffic service applied for :
Mark the appropriate block
<input type="checkbox"/> A single air traffic service.
<input type="checkbox"/> A combination of air traffic services.

2.2	Supporting documents:  Mark the appropriate block <input type="checkbox"/> The manual of procedure.
-----	--

**3. APPLICATION FOR THE AMENDMENT OF AN AIR TRAFFIC SERVICE UNIT APPROVAL**

3.1	Approval number: .....	3.2	Expiry date: .....
-----	------------------------	-----	--------------------

3.3	Particulars of amendments applied for: ..... ..... ..... .....
-----	--

3.4	Supporting documents:  Mark the appropriate block <input type="checkbox"/> Amended manual of procedure
-----	---

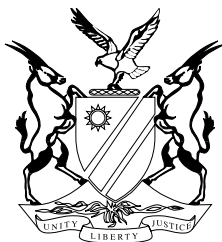
**4. APPLICATION FOR THE RENEWAL OF AN AIR TRAFFIC SERVICE UNIT APPROVAL**

4.1	Approval number: .....	4.2	Expiry date: .....
-----	------------------------	-----	--------------------

4.3	Type of air traffic service applied for :  Mark the appropriate block <input type="checkbox"/> A single air traffic service. <input type="checkbox"/> A combination of air traffic services.
-----	--

4.4	Supporting documents:  Mark the appropriate block <input type="checkbox"/> The manual of procedure.
-----	--

*Annexure C*



**REPUBLIC OF NAMIBIA  
CIVIL AVIATION**

**AIR TRAFFIC SERVICE UNIT APPROVAL**

1. Approval number: .....	2. Expiry date: .....
---------------------------	-----------------------

3. Type of air traffic service : .....
--

4. Name of holder: .....
.....

5. Physical address of holder: ..... ..... .....	6. Postal address of holder: ..... ..... ..... Postal code: .....
---	---

7. Scope of approval: ..... ..... .....
--

8. I hereby certify that the holder of this approval has been duly approved in accordance with Part 172 of the Namibian Civil Aviation Regulations, 2001.
---

.....  
Director: Civil Aviation

.....  
Date of issue





**PART III: CAPITAL ASSETS - GROSS CAPITAL INVESTMENTS DURING  
THE YEAR**

Facility or service		Gross capital investments
1.	ATS - Air traffic service .....	20 315 000
2.	COM - Communications .....	1 720 000
3.	MET - Meteorological services .....	5 250 000
4.	SAR - Search and rescue services .....	-
5.	AIS - Aeronautical information services .....	-
6.	TOTAL .....	27 285 000

Remarks: (including description of any major deviation(s) from the reporting instructions)

- A/ Revenue from sale of publications  
 B/ Includes contribution to the Eurocontrol Agency budget in respect of services rendered  
 C/ Included under column B/

### GENERAL INSTRUCTIONS

This form is to be filed by the holder of an air traffic service unit approval providing en route air navigation facilities and services, within its territory or externally to it, for international civil aviation.

The form is to be filed annually. It is preferred that the data reported cover the calendar year (January to December). However, if this is not practical, it may cover a different 12-month period (e.g. financial year). The form should be filed as soon as possible after the annual data become available but no later than 6 months after the end of the period to which it refers.

It is recognised that holders may experience difficulties in reporting all of the data requested on the form, in which case the following general guidelines apply:

- Where an actual figure cannot be reported a reasonable estimate will be adequate. Estimates should be identified with an asterisk (\*) following the estimated figure.
- Combined financial data for two or more facilities or services, or items, can be reported if a breakdown cannot be made, in which case this should be clearly indicated on the form.
- General guidance in the area of route facility cost-accounting and cost-allocation may be found in the Manual on Route Air Navigation Facility Economics (ICAO Doc 9161-AT/724).
- The "Remarks" section of the form should be used to explain any major deviations from the reporting instructions.

### FACILITIES AND SERVICES

For purposes of this form:

"FIR/UIR" means flight information region/Upper flight information region;

"ATS" (air traffic services) means the employment of personnel and facilities for providing variously, flight information service, alerting service, air traffic advisory service, air traffic control service, area control service, approach control service or aero-

drome control service;

“COM” (communication facilities) means the communication facilities that are broadly classifiable under three main categories COM fixed (aeronautical fixed service), COM mobile (aeronautical mobile service) and NAVAIDS (aeronautical radio navigation service);

“COM fixed” comprises all facilities and personnel employed to maintain telecommunication services between fixed points, such as LTT, RTT, MAS, ATS direct speech circuits, and ATS computer data circuits, including terminals and switching centres;

“COM mobile” comprises all facilities and personnel located on the earth’s surface that are engaged in air/ground communications and radiotelephony broadcasts such as VOLMET (i.e. VHF and HF transmitting and receiving stations);

“NAVAIDS” comprises radio equipment provided on the earth’s surface for the benefit of aircraft, and intended for the determination of position or direction, or for warning of obstructions to air navigation: included, for example, are VOR, DME, NDB, LORAN and CONSOL;

“MET” (meteorological services) means meteorological services that comprise those facilities and services that furnish aviation with meteorological forecasts, briefs and observations as well as SIGMET information, VOLMET broadcasting material and any other meteorological data provided by States for aeronautical use;

“SAR” means search and rescue services;

“AIS” (aeronautical information services) means the employment of personnel and facilities for providing information pertaining to the availability of air navigation facilities and services and the procedures associated with them, necessary for the safety, regularity and efficiency of air navigation (i.e. AIP, AIC, NOTAM, etc.).

## **INSTRUCTIONS FOR PART I : REVENUES**

### **1. Route facility charges**

Any charges and fees specifically levied and collected for the provision of en route facilities and services.

### **2. Revenues from aerodrome charges allocated to route facilities**

Any revenues from aerodrome charges (e.g. landing or passenger-service charges) which are applied towards the costs of providing en route facilities and services.

### **3. Grants and subsidies allocable to route facilities**

Any payments received to meet the costs of providing en route facilities and services and not requiring the transfer of assets or provision of services in return.

### **4. Other revenues allocable to route facilities**

All other revenues not included in Items 1 to 3, but which are applied towards the costs of providing route facilities and services. Included here would be the profit, if any, on assets sold (i.e. the difference between the depreciated value (book value) and the sales price).

## **INSTRUCTIONS FOR PART II : EXPENSES**

The expenses which are to be reported are those contained in the accounting system to which should be added any additional costs which may have been included in the cost

basis for route facility charging purposes.

1. **Expenses by item**

1.1 Operation and maintenance (salaries, supplies and services)

The costs of employing operating and maintenance personnel (i.e. direct remuneration, training, travel, social insurance, pensions, remuneration in kind, etc.); the costs of power supply for operating and maintenance purposes; the costs of spare parts and materials incorporated or expended in maintaining equipment and buildings; rentals paid for premises and equipment; and charges for operating and maintenance services provided by others. Also to be included are the costs of services and supplies such as heating, air conditioning, lighting water, cleaning, laundry, sanitation, stationery and postage.

1.2 Administrative overheads

To the extent they have not been included under Item 1 include the costs of common administrative services such as overall management, economic planning, etc.

1.3 Depreciation and/or amortisation

The amounts by which the value of the assets has decreased during the year due to physical deterioration, obsolescence and other such factors that limit their productive life. Also to be included are amounts by which intangible assets (e.g. investments in experimental research and training projects) have been written off during the year.

1.4 Interest

Interest paid or payable on debt during the year as well as any interest computed on capital assets.

1.5 Other expenses

Expenses not already included under expense items 1.1 to 1.4 above.

2. **Expenses by facility or service**

Columns (b) to (f) provide for the reporting of expenses by facility or service. The totals for all the facilities and services are to be reported in column (a), rows 1 to 6.

3. **Expense allocation by type of utilisation**

In reporting the allocations of total expenses to en route, aerodrome and non-aeronautical utilisation, approximate absolute amounts or even percentages will suffice. (Guidance concerning such allocations may be found in the Manual on Route Air Navigation Facility Economics, ICAO Doc 9161-AT/724).

**INSTRUCTIONS FOR PART III : CAPITAL ASSETS - GROSS CAPITAL INVESTMENTS DURING THE YEAR**

1. **Gross capital investments during the year**

The value of any fixed assets acquired during the year.

2. **Fixed assets**

All the physical property that is of a lasting nature, such as land and improvements thereto, buildings and durable equipment (machinery, vehicles, furniture and

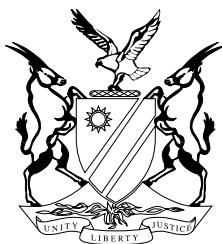
fixtures, tools, etc.).

*Note: When an asset, such as a building, is being completed gradually over a period of years, the capital expenditure incurred during the year should be reported rather than the accumulated total once the asset is put into commission.*

## **SYMBOLS**

Please use the following symbols in filling this form:

- X Estimated data
- & Magnitude less than half the unit value
- Magnitude nil
- Category not applicable
- Data not available.

*Annexure E*

**REPUBLIC OF NAMIBIA  
CIVIL AVIATION**

**EXAMPLE OF A COMPLETED ANNUAL EN ROUTE  
FACILITY FINANCIAL REPORT**

**EN ROUTE FACILITY TRAFFIC STATISTICS**

State: XYZ

Year ended: .....

FIR/UIR(s) covered:

Data are required are the totals at the foot of columns (b) and (d). The breakdown by FIR/UIR is optional.

Currency: RX

.....

ABC  
BCD  
CDE  
EFG

Estimated data, identified by an asterisk (\*), may be used if exact data are not available.

Name of FIR/UIR	Number of flights			
	International flights (including IGA)	Domestic flights (including GA)	Other flights	Total flights
(a)	(b)	(c)	(d)	(e)
ABC	8 639	173 447	10 928	193 014
BCD	100 473	18 35	14 294	133 102
CDE	35 234	205 510	20 961	261 705
EFG	3 800*	128 000*	20 000*	151 800*
Total - all FIR/UIR(s)	148 146*	525 292*	66 183*	739 621*

Remarks: (including description of any major deviation(s) from the reporting instructions)

Column (d) includes training, local and domestic military flight.

**GENERAL INSTRUCTIONS**

This form is to be filed by the holder of an air traffic service unit approval providing area control or flight information services for one or more FIRs/UIRs within its territory of externally to it

The form is to be filed annually. It should be filed within four months of the year being reported.

Only IFR and other flights for which flight plans have been filed with the respective area control centre(s) or flight information centre(s) should be reported. Flights should be counted separately for each FIR/UIR through which they move.

It is recognised that holders may experience difficulties in reporting all of the data requested on the form, in which case the following general guidelines apply:

1. Where an actual figure cannot be reported a reasonable estimate will be adequate. The estimates should be identified with an asterisk (\*) following the estimated figure.
2. The "Remarks" section of the form should be used to explain any major deviations from the reporting instructions.

## **DEFINITION OF TERMS AND INSTRUCTIONS**

For purposes of this form:

"domestic flights" (including GA) means all flights including general aviation wholly within the territory of one State except flights by State aircraft for other than civil purposes which should be reported under column (d) "Other flights"

"FIR/UIR" means flight information region/upper flight information region;

"flight" means the movement of an aircraft during its en route phase through the airspace of an FIR/UIR; Each such movement following a landing within the FIR/UIR is to be counted as a separate flight;

"international flights" (including IGA) means all international air transport flights and all international general aviation flights;

"other flights" means all flights not reported under columns (b) and (c).

## **SYMBOLS**

Please use the following symbols in filling this form:

- |     |   |
|-----|---|
| X   | Estimated data                          |
| &   | Magnitude less than half the unit value |
| -   | Magnitude nil                           |
| --  | Category not applicable                 |
| --- | Data not available.                     |

*Annexure F*



**REPUBLIC OF NAMIBIA  
CIVIL AVIATION**

**AIR TRAFFIC SERVICE INCIDENT REPORT**

- | <b>1. Actions performed by ATSU</b>   | <b>Tick appropriate</b>   |     |    |
|---|---|-----|----|
| 1.1 Radiotelephony and telephone tape recordings impounded  | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.2 Radiotelephony and telephone tape recordings transcribed and attached to report with cassette copy included | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.3 Recorded radar data available   | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.4 Copies of meteorological reports and forecasts relevant to the time of the incident                         | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.5 Copies of flight progress strips and other relevant data  | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.6 Technical statements concerning the operation status of equipment, if applicable                            | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.7 Unit findings and recommendations for corrective actions, if appropriate                                    | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |
| 1.8 Appropriate INCREP filed. Note: If NO please state reason   | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">YES</td> <td style="padding: 2px 10px;">NO</td> </tr> </table> | YES | NO |
| YES   | NO  |     |    |

.....

.....

.....

.....

**2. Background to the incident (Description based on available facts)**



**3. Personal information**

- 3.1 Name of ATC
- 3.2 Licence number
- 3.3 Position and frequency
- 3.4 Date of last standards evaluation
- 3.5 Date of last medical
- 3.6 Technical statements concerning the operation status of equipment, if applicable
- 1.7 Unit findings and recommendations for corrective actions, if appropriate

**4. Analysis of incident**

## 4.1 Procedures

## 4.2 Data and display

## 4.3 Coordination

## 4.4 Communication

## 4.5 Equipment

**4.6 Personnel performance**

--

**4.7 Task environment**

--

**5. Unit findings (factual)**

--

**6. Probable cause of the incident**

--

**7. Unit recommendations**

--

\_\_\_\_\_  
INVESTIGATING OFFICER

\_\_\_\_\_  
DATE

**8. Appendices**

--

**9. Standards officer recommendations**

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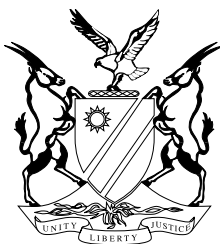
STANDARDS OFFICER

---

DATE

**10. Officer-in-charge of ATSU comments****11. Quality assurance**

An applicant for the issuing of an air traffic service licence shall:

*Annexure G*

**REPUBLIC OF NAMIBIA  
CIVIL AVIATION**

**LETTER OF PROCEDURE BETWEEN**

**A**

**AND**

**B**

**1. DOCUMENT MANAGEMENT**

1.1 Table of contents

Topic	See page
Table of contents	2
Checklist of effective pages	2
Introduction	3
Objective	3
Scope	3
Effective date	3
Airspace definition	4
Separation	5
Coordination and communication	6
Revision	10
Dissemination	11
Authority	11

1.2 Checklist of effective pages

Subject	Pages	Issue date
Letter of Procedure	11	

## 2. OVERVIEW

Introduction	The following document is a Letter of Procedure between ..... involving the following units:  and
Objective	A statement of agreed procedures between .....
Scope	The procedures contained in this operational Letter of Procedure supplement or detail, where so required in the vicinity of the common FIR boundary, those prescribed by ICAO Annex 2, Annex 11, PANS-RAC (Document 4444), Regional Supplementary Procedures (Document 7030) and local AIP, ATS instructions and .....
Effective date	This Letter of Procedure becomes effective on .....

## 3. AIRSPACE

Airspace definition

## 4. SEPARATION

General

Vertical separation      Assignment of cruising levels shall, as far as possible, comply with the IFR table of Cruising Levels In Appendix 3 of ICAO Annex 2, except:

Cruising levels which do not correlate to track and cruise climbs may be approved, subject to prior coordination and agreement.

Longitudinal separation

## 5. COORDINATION AND COMMUNICATION

Transfer of control point

Communication systems

Level changes

Near boundary operations

Transfer of responsibility

Transfer of communication

## 6. REVISION

Revision conditions      This Letter of Procedure shall be subject to revision whenever a modification to ICAO standards, recommended practices and/or regional supplementary procedures standard operating procedures, AIP or instructions, which might affect the procedures contained in this Letter of Procedure occurs, or when new communications facilities, or air traffic services which might affect these procedures are commissioned.

For any other reason which might make it advisable to change this Letter of Procedure and its associated attachments, either ATSU shall propose the pertinent revision, with approval from .....

When less than thirty (30) days exists between an identified need to amend this Letter of Procedure and the effective date of the amendment, the respective Centre Manager or their designated deputies shall agree via telephone, followed by confirming fax message signed by all parties, on the nature of the change and publish the change to staff by a suitable local instruction. Formal exchange of signed copies of the amended document shall take place as soon as practicable thereafter, following ..... approval.

**7. DISSEMINATION**

Dissemination agreement Notwithstanding the provisions outlined in revisions, the dissemination of this Letter of Procedure and its subsequent modification shall be made in full, thirty (30) days before the effective date.

Authority Signed ..... and .....

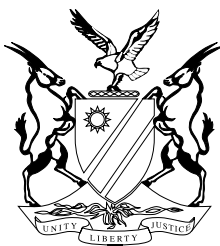
.....  
OIC Air traffic services

.....  
OIC Air traffic services

.....  
Date

.....  
Date

*Annexure H*



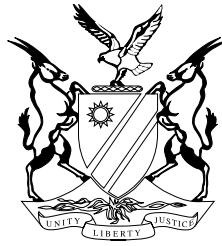
SAR EURONAUTICAL REPORTING FORM					
Priority Number		Addressee(s) indicator(s)			
SS	FAHQYQQ	FAHQYRYX	FAJSZGBL	FAJSYCYX	FAATMATS
					*/
Filing time		Originator indicator			
Specific identification of addressee(s) and/or originator					*/
3	5	Originator	Nature of emergency		
<b>(ALR (PHASE))</b>					*/
7		8 87			
					*/
9		10 87			
					*/
13		FIR Boundaries and estimated times			
					*/
					*/
15		Route			
					*/
					*/
17		Alternate aerodrome(s)			
					*/
18					
					*/
19		Emergency and survival equipment			
*FUEL =POB/ =RDO/121/5=243=500=8364					
Equipment		Life jackets		Frequency	
POLAR = DESERT = MARITIME = JUNGLE = JACKETS = LIGHTS = FLOURESCEIN =					
Dinghies		Colour		Number Total capacity Other equipment	
DINGHIES = COVER = RMK/					
					*/
20		Last contact with (unit) at (time) on (freq) from (position)			
How position determined		Colour of aircraft		Action taken by reporting unit	
A/C Callsign or name/Address/Tel No if info from third party				Other information	
					*/Signature

**AERONAUTICAL SEARCH OPERATION BRIEFING FORM**

<b>AERONAUTICAL SEARCH OPERATION BRIEFING FORM</b>		Date/Time
1.	Search aircraft:                      Type .....	Registration .....
2.	Pilot-in-command .....	
3.	Time of departure .....	
4.	Nature of distress or emergency .....	
5.	Description of object of search:	
	(a) Aircraft::                      Type .....	Registration .....
	Vessel:                      Type .....	Name: ..... Tonnage .....
	Other:	
	(b) Colour and distinctive markings and characteristics ..... .....	
	(c) Owner or operating agency .....	
	(d) Number of persons aboard .....	
	(e) Emergency equipment carried .....	
	(f) Remarks .....	
6.	Description of search area:	
	(a) Delineation	
	(b) Position of start of search, datum point or line	
	(c) Area to be covered	
	(d) Nature of terrain, if search over land	
	(e) Clues indicating presence of search objective	
7.	Type and method of search:	
	(a) Pattern to be used .....	at (Height/altitude)
	(b) Search visibility distance .....	track spacing .....
	sweep width .....	



<p>(c) Scanning procedures .....</p> <p>(d) Recording of areas searched .....</p> <p>8. Other search and rescue facilities to be engaged, and areas assigned:</p> <p>(a) Aircraft .....</p> <p>(b) Marine craft .....</p> <p>(c) Land parties .....</p> <p>9. Frequencies and call signs to be used for communications with:</p> <p>(a) RCC or search aircraft in charge .....</p> <p>(b) Other search aircraft .....</p> <p>(c) Marine craft .....</p> <p>(d) Land parties .....</p> <p>(e) Aircraft or vessel in distress/survivors .....</p> <p>(f) If above is not practicable, contact ..... on</p> <p>(g) Miscellaneous .....</p> <p>10. Frequencies to be guarded for transmissions from survivors .....</p> <p>11. Special instructions concerning flight to and from search area .....</p> <p>12. Type and quantity of droppable survival stores to be carried .....</p> <p>13. Action on sighting the search object (delete as necessary)</p> <p>(a) Report to</p> <p>(b) Drop communications equipment, survival stores and/or para-rescuers, if necessary.</p> <p>(c) If unable to effect rescue, direct surface facilities and other aircraft to the scene.</p> <p>(d) Take photographs of wreckage and survivors.</p> <p>(e) Remain at scene until relieved or forced to return, or rescue has been effected.</p> <p>14. All above points were passed to:</p> <p>Name .....</p> <p>at ..... (place) on ..... (date) at ..... (time)</p> <p>via telephone / W/T / R/T / briefing</p> <p style="text-align: right;">Signature.....</p> <p style="text-align: right;">(Briefing Officer)</p>
---

*Annexure I***AERONAUTICAL SEARCH OPERATION DEBRIEFING FORM****SEARCH OPERATION DEBRIEFING FORM**

Date .....

1. Search aircraft:                      Type .....                      Registration .....
2. Pilot-in-command
3. Time of departure
4. Search area assigned  
.....  
.....
5. Search carried out:
  - (a) Visual: .....                      Electronic .....
  - (b) Patten(s) used .....                      at                      (height/altitude)  
.....                      at                      (height/altitude)  
.....                      at                      (height/altitude)
  - (c) Track spacing .....                      Sweep width .....
  - (d) Search began at .....                      Ended at .....
  - (e) Type of navigation
  - (f) Number of observers .....                      Where they rotated? .....
6. Description of search area:
  - (a) Delineation .....  
.....  
.....

(b) Object of search found / not found  
If found, location and condition .....

(c) Number and condition of survivors .....

(d) Location of other sightings .....

7. Frequencies and call signs used for communications with:  
(a) RCC or search aircraft in charge .....  
(b) Other search aircraft .....  
(c) Marine craft .....  
(d) Land parties .....  
(e) Aircraft or vessel in distress/survivors .....  
(b) Other search aircraft .....

8. Signals received from survivors .....

9. Survival stores carried ..... dropped .....  
Results .....

10. Weather conditions in the search area .....

11. Remarks  
.....  
.....  
.....

Signature .....  
(Pilot-in-command)