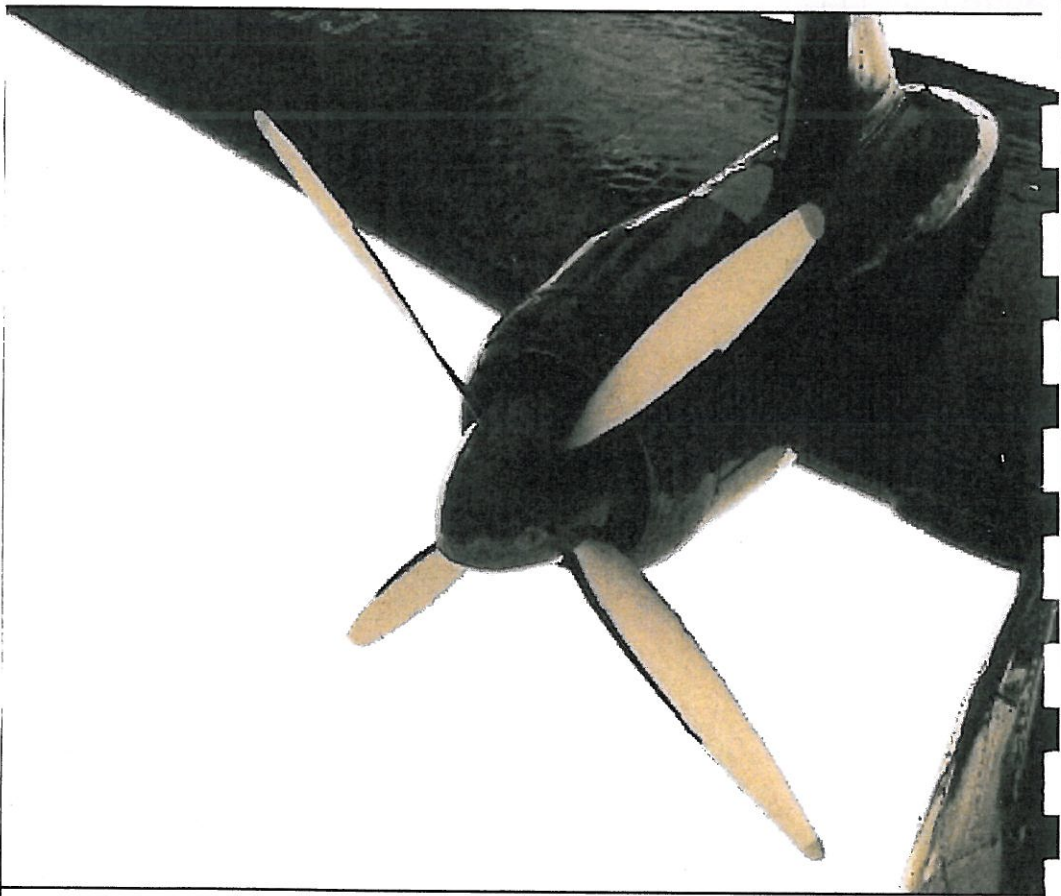


Namibian Air Law

PPL Reference and Study Guide



Red Sky Ventures

<http://www.redskyventures.org>
Namibian Air Law for PPL
This Edition March 2008
© September 2003



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First Edition: September 2003
This Edition: March 2008

Disclaimer

Attempt has been made to summarise the Law as accurately as possible, however mistakes may still be made, the author holds no liability for incorrect information.
Whenever there is doubt in the content of this document, the above original documents or the authority should be referred to, every entry has a reference for this purpose.

Table of Contents

Namibian Air Law	7
Explanation of Parts:	7
ICAO Documents and their Application	8
Explanation of Text	8
Layout	8
Use of case and formatting	8
PART 1: ABBREVIATIONS AND DEFINITIONS	9
PART 61: FLIGHT CREW LICENSING	16
Part 61.01 Licensing General Requirements	16
Category ratings	16
Class ratings	16
Type ratings	16
Logbooks	16
Log book Summaries	16
Cancellation of License	16
Change of Name, Address, or appearance	16
Crediting of Flight Times	16
Carrying and Producing License	17
English Proficiency	17
61.03 Private Pilot License (Aeroplane)	17
Requirements	17
Experience	17
Skill Test	18
Validity	18
Privileges	18
Ratings for Special Purpose	18
Maintenance of Competency	18
61.16 Type Ratings	18
Requirements	18
Training	19
Theoretical Knowledge Examination	19
Training	19
Skill test	19
Validity	19
Privileges	19
Notification of Addition to Type or Type Variant	19
Renewal	20
Reissue	20
61 Subparts 17-40: Ratings	20
61.31 Night Rating	20
61.40 Safety Pilot Rating	20
PART 67: MEDICAL CERTIFICATION	21
Classes of medical certificate	21
Validity	21
Duties of the holder	21
Foreign Medical Assessment	21

21 Validity of records.....

21 Medication.....

22 PART 91: FLIGHT OPERATIONS.....

22 91 01 Flight Operations General.....

22 Applicability.....

22 Endangering safety.....

22 91 02 Crew.....

22 Crew responsibility.....

22 Emergency Duties.....

22 Prohibition.....

22 Flight times.....

22 Deviation from CARs.....

23 Duties of PIC.....

23 Pre-flight Action.....

23 Duties of PIC.....

23 Flight operation.....

23 Authority of PIC.....

23 General Duties of PIC.....

23 Reporting Incidents.....

24 Critical Phases of Flight.....

24 91 03 Documentation.....

24 Documents to be Carried.....

24 Documents for Cross Border Flights.....

24 Aircraft Flight Manual.....

24 Checklists.....

24 Flight Plans.....

25 Tech Logs.....

25 Fuel and Oil Records.....

25 Release to service.....

25 Cockpit Voice Recorders (CVR).....

25 91 04 Instruments and Equipment.....

25 Use of Equipment.....

26 Circuit protection.....

26 Lights.....

26 Navigation lights.....

26 Equipment for VFR.....

26 Icing.....

27 Electronic Devices.....

27 Permitted Electronic Devices.....

27 First Aid Kits.....

27 Hand Held Fire Extinguisher.....

27 Crash Axes and Crowbars.....

27 Flight Over Water.....

27 Survival equipment.....

27 a) 50ml/4 persons or part thereof on board.....

28 b) One Knife.....

28 Windshield Wipers.....

28 TCAS.....

28 Transponders.....

28 91 05 COMMUNICATION AND NAVIGATION EQUIPMENT.....

28	Communication Equipment
28	Navigation Equipment
28	Navigation Equipment Requirements
29	91.06, 91.07: RULES OF THE AIR AND FLIGHT OPERATIONS
29	Rules of the Air: General
29	Landing and Taking Off on Roads
29	Use of Aerodromes
29	Night Flights
29	Dropping of Objects
29	Picking Up and Towing
29	Towed Aircraft
29	Formation Flights
29	Right Of Way Rules
29	Taxi Rules
30	Taxing
30	Time Features
30	Speed Restrictions
30	Operation in the Vicinity of an Aerodrome
30	Vicinity
30	Prohibited Areas
31	Restricted Areas
31	Danger Areas
31	Communication
31	Signals
31	Light Signals
31	Visual Ground Signals
34	Pyrotechnic Signals
34	Mandatory Radio Communication
34	Priority
34	Loss of Communications
34	Radio Failure Procedure
35	Compliance with ATC
35	Interception
35	VFR: Visual Flight Rules
35	Visibility and Distance from Cloud
36	Special VFR
36	VFR Operating Minima
36	Responsibility to Maintain VFR
37	VFR Met Minima
37	Met Conditions
37	VFR Operating Minima
37	Heights and Operating Levels
37	Minimum Heights
38	Aerobatics
38	Transition Altitude and Level
38	Transition Altitude and Level
38	Semi Circular Rule
38	Semi Circular Levels
39	Mass and Balance
39	Mass and Balance

39	Mass and Balance Documentation
40	Standard Masses
40	Fuel
40	Fuel Reserves
40	Fuel and Oil
40	Refueling and Defueling
41	Carrage of Persons
41	Seating
41	Seatbelts
42	Passenger Briefing
42	Method of Carriage
42	Admission to Flight Deck
42	Oxygen
42	Oxygen Requirements
42	Supplemental Oxygen
42	PIC Responsibility
43	Oxygen
43	Additional Oxygen Requirements
43	Flight Operating Rules
43	Operating Minima
43	Met Conditions
43	Smoking
43	Search and Rescue
43	Search and rescue Information
43	Ground to Air Signaling
43	Emergency Simulation
44	Starting Engines
44	Aerobatics
44	91.10 Maintenance
45	AIP Information
46	APPENDIX
46	Appendix 1: Flight Training Air Law
46	Flight Instruction Syllabus
46	Exercises
47	Training and Flight Schools
47	Authority
48	Training rules
48	GFA
48	Flight Authorisation
48	CPI responsibility
48	Low flying
48	Communication
48	FLWOP
49	Appendix 2: Log Book summaries
50	Appendix 3: NAMCATS 91 Standard first aid kits

Introduction

Namibian Air Law

The Namibian Air Law is comprised of the following Documents:

- a) Namibian Civil Aviation Regulations: NAM CAR
- b) Namibian Civil Aviation Technical Standards: NAM CATS
- c) Namibian Integrated Aeronautical Information Package: AIC, AIP, AIP SUPP

This document has been compiled from the Namibian CAR, the published CATS, relevant parts of the other documentation forming the IAP. Some references have been taken, when necessary, from ICAO documents as explained below.

The Namibian law is currently under revision. Some of the NAM CATS have been published, however there are still some missing pieces in their implementation. Where there is no provision in the NAM CAR's the standard must revert to the previous Namibian Law, that is, the South African Civil Aviation Law as amended and frozen in 1991. Where these documents, mainly the ANR and RAC sections, are referred to it is noted. Once the NAM CATS have been published these study notes will be amended as soon as practical to reflect the changes. Of those applicable, Part 61 CATS is still to be released at present.

Explanation of Parts:

The Civil Aviation Regulations (CAR), for ICAO countries, and the FAR and JAR have been divided into parts with the same base numbering for ease of reference. Meaning, for example, if you wish to find out about flight crew licensing for example, you will look in "Part 61" whether you look in the Namibia, South Africa, USA, or anywhere else that follows this system.

The purpose of the Civil Aviation Technical Standards (CATS) is to attach further definitions to the regulations, which may be amended without the requirements of regulations. The information contained bears the same reference number to the regulation that it applies to. The CAR's require that the CAT's be adhered to, so in this sense it has the same gravity as the CAR's, but avoids overburdening the rules with technicalities that may change, and simplifies the amendment process.

The parts of particular interest to flight crew members are:

- Part 1: Definitions and Abbreviations
- Part 11: Details and Exemptions
- Part 12: Accidents and Incidents
- Part 43: AMO certification
- Part 61: Flight crew licensing
- Part 67: Medical Certification
- Part 91: Flight Operations
- Part 92: Dangerous goods
- Part 121: Air transport operations: Large Aeroplanes
- Part 127: Air transport operations Helicopters
- Part 135: Air transport operations: Small Aeroplanes
- Part 139: Aerodrome Licensing
- Part 141: Aviation training organisations

Use of case and formatting
 Where possible original text has been used, however, in some cases for ease of reference phrases have been abbreviated or simplified. Text in capitals has been used to emphasize important points, and is therefore normally a direct quote. Text in italics is author opinion provided for clarification or for interest.

Layout
 Generally the chronological layout of the parts has been followed. Some text has been grouped in order of subject where it was seen to be more relevant, for example fuel, weight and balance etc, where all related references have been included.

These notes have been compiled to provide an easy reference for the relevant information for PPL law. This is not only a study guide for exam purposes but is aimed at providing a reference source of the relevant parts of the Namibian law for private pilots while operating within Namibia.

Explanation of Text

- Document 9432 Radio Procedures
- Document 4444 ATC Procedures
- Annex 14 Aerodromes
- Annex 4 Aeronautical Charts
- Annex 3 Meteorological Service
- Annex 2 Rules of the Air
- Annex 1 Flight Crew Licensing

Important ICAO documents referenced to in this text are:

Namibia is an ICAO member state, and as such is required to comply with the ICAO Annexes, Documents and SARPs (standards and recommendations). Where a member state elects to deviate from the ICAO recommendations they are required to file a difference. Such differences are filed as attachments to the ICAO relevant document to which the difference applies. According to the Namibian AIP, and the ICAO documents referenced to in this book, there are no operational differences filed, however there are several different applications in the finer points of the law which generally still comply with ICAO but add to the requirements.

ICAO Documents and their Application

This text was written for the fixed wing, VFR Private Pilot, therefore Part 1, 61, 67, and 91 have been covered in detail. Instrument flight rules are included in the CPL notes.

PART 1: ABBREVIATIONS AND DEFINITIONS

Abbreviations are necessary for understanding the content of the PPL Law syllabus, you will find most will be in common use in your contact with the aviation environment. Definitions are very important for interpretation of the law and so should be known.

ab-initio	Initial training in an aircraft or simulator
AGL	above ground level Refers generally to a height
AMSL	above mean sea level Refers generally to altitude on QNH
accident	An occurrence associated with the operation of an aircraft resulting in serious or fatal injuries or damage adversely affecting structural strength or performance or requiring major repair
AQP	advanced qualification program A program established for training and checking to establish and maintain a level of proficiency
ADSR	advisory route A route where advisory service is available, implemented to assist flow (not controlled)
AFIS	aerodrome flight information service Air traffic service assistant providing information for the assistance of safe flight operation
AOOM	aerodrome operating minima Minimum conditions for operating into an airfield (typically expressed as visibility and cloud base)
ATA	aerodrome traffic area Area around an aerodrome established for protection of the traffic where a flight information service is provided
AIC	aeronautical information circular Information pertinent to aviation that does not qualify for inclusion in an AIP or NOTAM, relating to flight safety, air navigation, technical, administrative or legislative matters
AIP	aeronautical information publication Information issued by the director essential to air navigation Power driven, heavier than air, deriving lift from a fixed surface ("fixed-wing")
AIP SUP	AIP supplement Temporary changes to the information in the AIP, these issues always have an expiry date
ANR	air navigation regulations Section of previous Namibian and SA Civil Aviation Regulations concerning aircraft operations and licensing
AOC	air operator certificate Certificate issued by the director authorising specific commercial air transport operations
ATC	air traffic control An aerodrome, approach or area control service for preventing collisions and maintaining expeditious and orderly flow of aircraft
ATS	air traffic services Air traffic control, flight information, alerting, or air traffic advisory services provided to aircraft

NB information and advisory services provide traffic information only, are not responsible for separation nor do

ATZ	air traffic zone	Controlled airspace around an aerodrome for the protection of aerodrome traffic
ATO	air transport operator	Operator providing air transport services
ASI	airspeed indicator	Instrument used for indicating airspeed
	altering service	service to provide notification for search and rescue
	altitude	the vertical distance of an object/level/point above mean sea level (altitude set to QNH)
	approved	Approved by the Director (including any variation of this terms)
AFM	approved flight manual	Flight manual approved by DCA
AH	artificial horizon	Instrument used to determine attitude
AFI	automatic flight control	Auto pilot or similar system for controlling aircraft without pilot input
AMO	aviation maintenance organisation	Organisation licensed in terms of part 43
CAS	calibrated airspeed	The indicated airspeed corrected for instrument error
	ceiling	Height above ground or water of the lowest layer of cloud below 20,000ft covering more than half the sky
	child	2 years of age but not yet 12 years
CAR	civil aviation regulations	The Civil Aviation Law issued in 2001 comprising Parts 1 to 187 in accordance with international standards
CATS	civil aviation technical standard	Technical standards are operating instructions issued by the director, they are not law, but the law (CAR) requires compliance with the technical standards
	clearance	Clearance from air traffic control
II (P2)	co - pilot	A pilot acting in a piloting capacity other than the PIC or a student receiving instruction
ATO	commercial air transport operations	Transport of cargo, mail or passenger or aerial work conducted for remuneration or hire
	communication failure procedure	A procedure published in the AIP and prescribed by ICAO procedures for loss of communications
CRP	compulsory reporting point	Designated point where a position report must be made
CDL	configuration deviation list	Allowable deviations of configuration from the aircraft flight manual
	contaminated runway	Greater than 25% foreign object cover (ice, snow, slush or more than 3mm standing water)
CTA	control area	Controlled airspace extending upwards from a specified limit above the earth

they give clearances.

CTR	control zone	Controlled airspace extending from surface to a defined upper limit, normally established around an airfield <i>NB: differentiates from ATZ typically because approach service is available</i>
CRM	crew resource management	Training to ensure efficient crew interrelations
	critical phase of flight	all operations below cruise altitude or 10,000 (the lower of implied)
	cross-country flight	A flight between a point of departure and a point of landing of not less than 20nm
	day	The time between 15 minutes before sunrise to 15 minutes after sunset
	designated	Designated by the director
(D)AM	(designated) aviation medical examiner	person appointed by the commissioner for air crew medical examinations or tests
DE	designated examiner	person appointed by the commissioner for air crew examinations or tests
DI	direction indicator	A stabilized instrument that indicates direction, alternate to the compass
DCA	director of civil aviation	The State authority for civil aviation
	distress	A condition of being threatened by serious and/or imminent danger, and requiring immediate assistance. Ref: ICAO Annex 10, and Document 9432 Note: the term MAYDAY spoken three times is used to indicate a distress situation in radio phraseology
	dry runway	Neither wet or contaminated and maintains an effective dry braking action
	emergency	A distress or urgency situation Ref: FAA Note: no definition in the NAMCARS. An emergency in terms of the civil aviation regulations relates to an occurrence involving the aircraft and its occupants, and does not include an external emergency on the ground, as endangering the occupants of the aircraft for an emergency which does not involve them is not acceptable practice. If in doubt, err on the safe side and declare an emergency. better to deal with the paper work than the consequences.
ELT	emergency locator transmitter	A device to transmit distinctive signals to aid rescue (AF)automatic fixed (AD)automatic deployable (S) survival

ETA	estimated time of arrival	Estimated time at which the aircraft will arrive OVERHEAD an airfield, and for IFR from a point at which the approach may be commenced
	flight	from the commencement of the take-off until the completion of the landing
FCM	flight crew member	Person licensed in accordance with Part 61 and assigned to duties essential to aircraft operation during flight
FIS	flight information service	Service provided for the purpose of providing advice and information useful for safe and efficient conduct of flights.
FL	flight level	A surface of constant atmospheric pressure referenced to the pressure datum 1013.2 and separated from other such surfaces by specific pressure intervals (<i>Altimeter set to 1013.25HPa or 29.92 "Hg standard setting or QNE</i>)
	flight time	The total in-flight time and the time from the moment the aircraft moves for the purpose of flight, until the moment it comes to rest (<i>This is the time that shall be recorded in your log book</i>)
	flight visibility	The visibility forward of the cockpit during flight
GFA	general flying area	Area in the vicinity of an airfield used for flight training and other manoeuvres, <i>uncontrolled</i> airspace
GPS	global positioning system	<i>Navigation system that uses satellite rather than ground-based transmitters for location information.</i>
GNSS	global navigation satellite system	A worldwide position and time determination system that includes one or more satellite constellations, aircraft receivers and system integrity monitoring.
GPWS	ground proximity warning system	Device for warning against reduced vertical separation from obstacles
	ground visibility	The visibility at an aerodrome measured by a recognized person
	hazard	An act or omission, event or condition that could lead to an accident or incident
	height	The vertical distance of an object/level/point measured from a specified datum (e.g. Height AGL)
	incident	An occurrence other than an accident, associated with the operation of an aircraft that affects or could affect the safety of operation
IAS	indicated airspeed	The airspeed "indicated" on the airspeed indicator (<i>uncorrected</i>)
	infant	A child who has not reached his/her 2 nd birthday (<i>less than two yrs old</i>)
IFR	instrument flight rules	Rules applicable to flight conducted in IMC
	instrument flight time	Time by which the aircraft is piloted solely by reference to instruments

instrument ground time	Time during which instrument flight time is practiced by simulating instrument flight time in a simulator
IMC	instrument meteorological conditions
instrument time	Instrument flight or ground time
IAP	integrated aeronautical information package Includes: AIP, AIC, AIP supplements, NOTAM
ICAO	international civil aviation organization International organization established for conformity and minimum standards of operation between aviation states A flight that passes over the AIRSPACE OVER THE TERRITORY of more than one state
KIAS	knots indicated airspeed The airspeed "indicated on the airspeed indicator in Knots Part of the movement area used for take-off or landing
large aeroplane	Aeroplane with a maximum certified take off mass greater than 5700kgs
licensed aerodrome	Aerodrome licensed under part 139
line flight	Flight carried out under normal commercial operations by the holder of an AOC
mach number	Ratio of airspeed to the speed of sound
major repair	A repair which if done improperly adversely affects the operating characteristics or is non standard
manoeuvring area	Area used for manoeuvring aircraft including runways, excluding aprons (control area)
MEL	master minimum equipment list MEL compiled by the manufacturer and approved by the state authority
MAFSC	maximum approved passenger seating configuration SA: maximum seating configuration excluding the light deck as specified in the operations manual and approved by the commissioner <i>Concerns limiting no of passengers for certain standards in Part 91, 135 and 121</i>
MCLM	maximum certified landing mass <i>Maximum weight of the aircraft in accordance with the mass and balance data for landing</i>
MCM	maximum certified mass <i>Maximum weight of the aircraft in accordance with the mass and balance data</i>
MCTO	maximum certified take-off mass <i>Maximum weight of the aircraft in accordance with the mass and balance data for take-off</i>
MEL	minimum equipment list List prepared by operator in conformance or more restrictive than that specified by aircraft type, <i>(specified in AFM) providing for operation under certain conditions with equipment inoperative for not operating as</i>

	movement area	The manoeuvring area and the apron
MCO	multi crew operations	Operations with more than one flight crew member
MPA	multi pilot aircraft	Aircraft required to have two or more pilots by the AFM
nm	nautical mile	A length equal to 1852 meters (‘‘AR definition’’) Standard nautical mile: 6080ft, and approximately one minute of latitude
	night	Hours outside those specified under day
	night duty	Greater than 4 hours duty between 2000hrs and 0600hrs
NOTAM	notices to air men	Notices distributed by telecommunications containing information of which timely knowledge is essential to flight operations
	operations manual	Shall mean the company operations manual approved by the director in terms of the operator certificate and referred to in either 121.043 or 135.043 as applicable
PIC or PI (P1)	pilot in command	Person responsible for operation and safety of the flight regardless of the manipulation of controls
POH	pilots operating handbook	Another term for an AFM, normally used by the FAA
PIB	pre-flight information bulletin	Presentation of current relevant NOTAM information prior to flight
	psychoactive substance	Includes alcohol, cannabinoids, opioids, sedatives and other psycho-stimulants, excludes coffee and tobacco: Always check with a DME prior to taking medication
PTT	push to talk	Push button operated switch for the microphone, typically mounted on the control column
QDM	Magnetic bearing to a station	Magnetic bearing to a station
QDR	Magnetic bearing from a station	Magnetic bearing from a station
QFE	The pressure measured at the field	The pressure measured at the field
	Set on Altimeter sub-scale indicates height above the field	Standard pressure of 1013.2hPa
QNE	Set on Altimeter sub-scale indicates Flight Level or Pressure Altitude	Set on Altimeter sub-scale indicates Flight Level or Pressure Altitude
QNH	The pressure reduced measured at the field and reduced to mean sea level using standard factors	The pressure reduced measured at the field and reduced to mean sea level using standard factors
	Set on altimeter sub-scale, to indicate height AMSL	Codes previously used extensively in aviation abbreviated transmission or for foreign stations, variously meaning ‘‘Query...’’ eg: QDM: Direction Magnetic, the above are the few remaining in common use
Q-codes		
	rating	Privilege or limitation attached to a license

(the case may be)

	release to service	Issuing of a certificate of release, or for line maintenance completing an appropriate entry in the technical log
RNP	required navigation performance	Navigational requirements of high density airspace for application of reduced separation standards
SAR	Search and Rescue	Actions, people or Services responsible for search and rescue operations
	serious injury	a) hospitalisation for more than 48hrs b) fractures, except simple fractures involving fingers, nose, or toes. c) lacerations involving severe hemorrhage, nerve, or tendon damage d) injury to internal organs e) 2 nd or 3 rd degree burns involving 5% of surfaces f) verified exposure to infectious substances or injurious radiation
STOL	short take off and landing	Eg: " STOL " kits, modification to improve take off and landing performance
	small aeroplane	Aeroplane with a maximum certified take off mass less than 5700kg
TSO	technical standard order	Minimum performance standard issued by the director
TMA	terminal control area	A Control area normally established at the confluence of ATS routes in the vicinity of major aerodromes
TAS	true airspeed	The Calibrated Airspeed corrected for density variations
	type of aircraft	All aircraft of the same basic design, including all modifications except those that effect the handling or flight characteristics
	urgency	A condition concerning safety but which does not require immediate assistance
VFR	visual flight rules	Flight conducted under visual flight rules: at or above the meteorological conditions required for visual flight
VMC	visual meteorological conditions	Meteorological conditions that permit flight under VFR
	wake categories	<i>Weight classifications as specified on flight plan and used as a means of providing standard wake separations</i> Light: below 7000kg MCM Medium: 7000-136,000kg Heavy: above 136,000kg
	wet runway	Less than 25% of the surface covered with water, slush or loose snow, sufficient moisture to make the runway appear reflective but not significant areas of standing water

PART 61: FLIGHT CREW LICENSING

Part 61.01 Licensing General Requirements

61.01.5	<p>Category ratings Category ratings comprise: i) Aeroplanes, ii) Helicopters, iii) Microlights, iv) Gliders, v) free balloons, vi) Airships, vii) Gyro planes; <i>A license will be issued in one category only</i></p>
61.05.6	<p>Class ratings Class ratings in the case of aeroplanes comprise i) single engine land, ii) single engine sea, iii) multi engine land, iv) multi engine sea</p>
61.05.7	<p>Type ratings Type ratings comprise 1) group type ratings: a) single engine piston aircraft 2700kg or less b) single and multi engine piston aircraft 5700kg or less 2) Aircraft not falling into above categories, multi pilot aircraft or aircraft with unconventional handling</p>
61.05.7	<p>Logbooks The holder of a pilot license shall maintain a logbook and therein maintain ATL time spent as a pilot, the form and manner shall be in accordance with the NAMCATS</p>
61.01.20	<p>Log book Summaries Logbook summaries must be completed for issue, reissue and renewal of licenses. Summaries must comply with the recommended format, as detailed in the Namibian AIC. A sample and explanation can be seen in the Appendix.</p>
61.01.20	<p>Cancellation of License An authorized person may suspend a license, rating, or validation for a period of not greater than 30 days if: a) it is evident the conditions of such are not being upheld or; b) in interests of aviation safety. Providing a report to the director and the person concerned The person concerned may appeal the suspension within 30 days of being made aware of the suspension Within 14 days the director may confirm or set aside the suspension or cancel the license, rating or validation</p>
61.01.20	<p>Change of Name, Address, or appearance A change in name, appearance or address shall be made by within 30 days to the director</p>
61.01.20	<p>Crediting of Flight Times The following flight time (as applicable to a private pilot) may be credited towards the total required for a HIGHER LICENSE: • Pilots may credit all flight time, dual and solo • A private pilot acting as co-pilot in an aircraft normally required to be operated with a co-pilot may credit 50% of the flight time to</p>

<p>Passed the theoretical exams referred to in NAM CATS</p> <p>Completed the training referred to in NAM CATS</p> <p>Hours maximum may be acquired in a simulator</p> <ul style="list-style-type: none"> • 5 hours cross country • 10hours solo flight time • 25hours dual instruction • 45hours total flight time <p>Total flight experience consisting of</p>	<p>61.03.2-4</p> <p>Experience</p>
<ul style="list-style-type: none"> • have completed the training requirements (detailed below) • hold a valid radio license • hold a valid Class 2 medical • hold a valid student license • be not less than 17 years of age <p>For issue of a PPL an applicant must</p>	<p>61.03.1</p> <p>Requirements</p>
<p>61.03 Private Pilot License (Aeroplane)</p>	
<p>to apply the SACAA rules for compliance in the interim.</p> <p>Nambian authorities at the time of publication. Operators may elect to be completed with, however no action has been implemented by the ICAO requirements and must be prescribed in SA-CATS-FCL.</p> <p>he or she has demonstrated ability to use the English language as</p>	<p>No person may be issued with a pilot license under this Part unless</p> <p>SACAR 61.01.7</p> <p>English Proficiency</p>
<p>person if requested</p> <p>privileges of and produce the license or rating to an authorized</p> <p>A pilot shall carry the license or rating issued when exercising the</p>	<p>61.01.32</p> <p>License</p> <p>Carrying and Producing</p>
<p><i>Other points relating to crediting of flight time are for helicopter hours and hours applicable to CPL pilots upgrading to ATP.</i></p> <p><i>note of the name of the second crew member should be made.</i></p> <p><i>3) Wherever flying with another pilot who is performing flight duties, made.</i></p> <p><i>time eg. SE copilot, other means of distinguishing the time must be pilot may log PIC. Whereupon there is not a column to display the</i></p> <p><i>2) From Part 91, One pilot must be designated as PIC, i.e. only one higher license the above requirements must be met.</i></p> <p><i>capacity you must log the time, however to credit these hours for a you are required to be there or you are acting in any piloting</i></p> <p><i>1) 61.01.16 all time spent as a pilot must be logged as such, i.e. if</i></p> <p><i>C of pilot time (explanation of rules):</i></p> <p><i>Note: It is very important to remember the difference between crediting of flight time for a higher license and logging of flight times. The crediting of flight times relates to the hour requirements necessary for a higher license. For log book requirements, see 61.01.16 above.</i></p> <p>a maximum of 20 hours.</p>	

SKill Test	61.03.5	<p>A skill test shall be completed IAW NAM CATS by a grade I or II instructor</p> <p>The Skill test shall be completed within 12 months of passing the theoretical exams, and within 90 days preceding application</p>
Validity	61.03.8	<p>A private pilot license shall remain valid indefinite providing:</p> <ul style="list-style-type: none"> • a valid medical certificate is held • maintenance of competency is completed in accordance with 61.03.11 • a valid type rating is held* <p><i>* Type ratings must be renewed in accordance with 61.16.7, which replaces the renewal of license requirements. See Type Ratings section for further requirements on renewal and reissue.</i></p>
Privileges	61.03.9	<p>A Private pilot may:</p> <p>(1) act as PIC or as co-pilot on any aircraft engaged in non revenue flights for which a valid type rating is held;</p> <p>(2) exercise the privileges of a rating for special purposes for which a valid rating is held in accordance with 61.01.10.</p> <p>For purposes of point (1) above, pro-rata sharing or direct operating costs among the occupants of the aircraft is not considered revenue.</p>
Ratings for Special Purpose	61.03.10	<p>Ratings for special purposes associated with a private pilot license:</p> <ul style="list-style-type: none"> • instrument rating; • night rating; • tug rating; • flight test rating; • safety pilot rating.
Maintenance of Competency	61.03.11 and 91.02.4	<p>A Private Pilot shall not act as PIC of an aircraft under VFR, while carrying passengers unless within the preceding 90 days three take-off and landings have been completed in the same TYPE OR SIMILAR TYPE as prescribed in the NAM CATS or in a similar TYPE simulator</p> <ul style="list-style-type: none"> • by day, or • by night if holding a valid night rating, and night privileges are required <p>If (2) (night competency) is complied with the license holder shall be exempt from the requirements of (1)</p> <p><i>Reference to Similar type is reserved, general meaning is of the same handling characteristics, which would invariably mean aircraft of the same type designer</i></p>
61.16 Type Ratings		
Requirements	61.16.1	<p>The applicant must:</p> <ul style="list-style-type: none"> • Hold a valid pilots license; • Have completed the required training, theoretical examination and skill test referred to below in regulation 61.16.2, 3 and 4.

Training 61.16.2	As prescribed in NAM CATS
Theoretical Knowledge	As prescribed in NAM CATS.
Examination	Note: See below 61.16.4, the skill test must be completed within 12 months of completing the theoretical examination.
Training ANR 3.8	Previous type rating practical training requirements from ANR's: 1) For aircraft less than 5700kgs MAUW i. three light load landings ii. three full load landings, including one single engine for a multi engine aircraft iii. any other exercise deemed necessary considering the applicants previous experience iv. If the applicants previous experience is limited: spinning or incipient spinning, forced landing and flap less landings 2) For aircraft greater than 5700kgs MAUW i. emergency maneuvers (which may include forced landing and stalling from level and steeply banked attitudes) ii. Operating at MCLM with one engine inoperative under visual and under instrument conditions iii. three full load and three light load landings
Skill test 61.16.4	The applicant shall demonstrate to a DESIGNATED EXAMINER competency appropriate to the license held. The skill test shall be completed within 12 months of passing the theoretical examination and 90 days preceding the application. The skill test shall be in an aircraft appropriate to the license held, or in a simulator.
Validity 61.16.7	For a private pilot a group rating shall be valid for a period of • 12 months from initial issue • 24 months from renewal or reissue A type rating by name shall be valid for a period of 12 months
Privileges 61.16.8	The holder of a valid group rating shall be entitled to act as PIC on any type within that group endorsed in the holders logbook. <i>This sub-section also details privileges relating to a type rating by name, however it is not considered relevant to PPL law, and should be explained during conversion training for a type rating by name.</i>
Notification of Addition to Type or Type Variant 61.16.9-10	A person wishing to add a type rating to a group may must complete training referred to in 16.2, with a FLIGHT INSTRUCTOR Addition of a type variant to a type by name shall be made by 16.3 or 4 as required with a DESIGNATED EXAMINER. Failure to meet the required standard shall be notified to the director by the flight instructor or designated examiner within 7 days.

Notification of an addition of a type or type variant to a group rating, or a type or type variant to a license shall be made by the holder of the rating to the director within 7 days of the endorsement in the holders logbook, accompanied by as applicable the appropriate form, or skill test and relevant pages of the logbook.

61.16.11
Renewal

Within 90 days immediately preceding the date of expiry complete a SKILL TEST WITH A DESIGNATED EXAMINER, and apply to the director on the appropriate form accompanied by the appropriate fee.
The director shall renew the type rating if this requirement is completed with.

(Replaces license renewal requirements)

61.16.12
Reissue

1-9) If a rating has lapsed for less than 60 months, the requirements for reissue are as described for a renewal above:
10) For periods greater than 60 months the applicant must complete the requirements for an initial issue with approval of the director

61 Subparts 17-40: Ratings

Subparts 16 to 40 cover all the ratings associated with a license, instrument ratings, instructor ratings, and many others.
The night rating and safety rating requirements are the most commonly sought after by a Private Pilot and have been included for interest.

61.31 Night Rating

The applicant must have:
A valid license and type rating
Experience consisting of:
• 10 hours Instrument time dual with an Instrument rated instructor, of which not more than 2 hours can be accumulated in a simulator.
• At least 5 take-offs and landings by night
• A dual cross country, of at least 3 legs of not less than 50nm each
Passed a theoretical examination as prescribed in the NAM CATS
Completed a skill test as prescribed in the NAM CATS, within 24 months of passing the theoretical examination

61.40 Safety Pilot Rating

Certificate of competency signed by a grade I or II instructor confirming the following:
• Not less than 100hrs flight time in the type of aircraft in which the applicant will act as safety pilot
• Complete the training and skill test as prescribed in the NAM CATS

PART 67: MEDICAL CERTIFICATION

Classes of medical certificate	67.00.1	1 (b) Class 2 - i) private pilot ii) student pilot
Validity	67.00.5	2) Class 2 medical certificates shall be valid for a period not exceeding: a) 24 months if less than 40 years of age; b) 12 months if 40 years of age or more; 3) A lesser period may be specified if deemed necessary
Duties of the holder	67.00.8	1) The holder of a medical certificate shall: a) carry the medical certificate while on duty b) not act as a flight crew member i. while aware of any medical condition that could affect the validity of the certificate ii. while receiving any treatment other than specified in the NAM iii. following the 30th week of pregnancy until 8 weeks following the birth c) Without undue delay notify the DME who issued the certificate of any: i. injury ii. hospitalization iii. surgical or invasive procedure iv. pregnancy v. regular use of medication vi. illness of more than 21 days vii. psychiatric treatment 2) provide proof of recovery to the DME prior to resuming duties
Foreign Medical Assessment	67.00.9	1) The director may recognize a foreign medical certificate for the purpose of validating a foreign license 2) Due to operation outside Namibia a medical certificate may be deferred: a) 6 months for non commercial air transport operations
Validity of records	67.00.11	The records of an examination for the purpose of issuing a certificate shall be valid for a period not exceeding 90 days
Medication	91.02.3	Part 91 states no flying may be completed within 8 hours of taking, or whilst under the influence of psychoactive drugs, this includes medicated and non medicated drugs. Many over the counter drugs are not safe to fly with, additionally prescribed substances without apparent side effects (for example antibiotics) may be forbidden. A designated medical examiner will have information on permitted medication except paracetamol, aspirin or vitamins. If you have been given any medication confirm with a DME whether the substance is permitted before flying, a general practitioner will often not be aware of the subtleties of the aviation medical restrictions.

PART 91: FLIGHT OPERATIONS

91.01 Flight Operations General

Applicability 91.01.1 This part shall apply to all aircraft registered in Namibian operated internationally and all aircraft operating within Namibia

Endangering safety 91.01.11 No person shall through an act or omission endanger the safety of an aircraft or person therein or cause or permit an aircraft to endanger the safety of any person or property

91.02 Crew

Crew responsibility 91.02.1 The number of flight crew shall be not less than that specified in the Certificate of Airworthiness or the flight manual.

If a crew member needs to operate a radio they must have a valid radio license.

One crew member only shall be assigned as PIC.

Emergency Duties 91.02.2 The owner, operator or PIC of a multi crew aircraft shall assign each crew member with duties to be performed in an emergency. Such duties shall include reasonably anticipated emergencies, and take into consideration incapacitation

Prohibition

91.02.3 1) No person shall act as a crew member:
a) Under the influence of a psychotropic drug, or within 8 hours of use of such substance;
b) Within 24 hours of scuba diving;
c) Within 48 hours of blood donation;
d) While knowing of or anticipating fatigue or impairment causing the inability to perform duties.
2) No crew member shall:
e) Engage in any problematic substance use;
f) Use a psychoactive substance within 8hrs prior to commencement of standby or flight duty;
g) Commence flight duty with blood alcohol of 0.04 grams per 100 ml or consume alcohol less than 8 hours prior to reporting for flight duty;
h) Take psychoactive substance within 8 hours of an accident of which they were involved, unless the accident or incident was not related to his/hre duties.

Flight times

91.02.3 2) No person shall act as a flight crew member for a planned flight time of more than:
a) 8 hours on one calendar day
b) 100 hours in 30 consecutive calendar days
c) 1000 hours in one calendar year
d) 6 hours ab-initio instruction in one calendar day
Note – private flights do not have "flight duty period" limitations, as duty limits relate to employment duties.

FDP

<p>Deviation from CARs 91.02.6</p>	<p>In an emergency INVOLVING the aircraft, (and or occupants), IN THE INTERESTS OF SAFETY, the PIC may deviate from any law or operational procedure. The PIC shall notify the Director of such deviation, forthwith, and comply with any subsequent requests of the director for submission of a report.</p>	<p>Duties of PIC: 91.02.7</p>	<p>The PIC may not commence a flight unless he/she is satisfied that: a) The aircraft is airworthy, b) Instruments and equipment required serviceable c) A release to service is issued in accordance with Part 43 d) Loading is in compliance with the AFM for MCM and mass balance requirements, Part 92 for dangerous goods carried, and is properly secured e) A flight plan has been completed and filed with ATS if required f) All required documentation, current maps and charts required are on board g) Performance is in compliance with 91.09 h) The external surfaces are clear of deposits that may affect controllability i) The required SAR information from 91.01.5 is available on board j) Fuel, oil, oxygen, MSA's and alternate availability have been checked and complied with k) NOTAM's, AIC, AIP, and ATS information must be checked, and all necessary facilities are operational l) The weather at the aerodromes to be used has been checked and above the required minimums Before takeoff, landing and when deemed necessary the PIC shall ensure the crew, passengers and equipment are properly secured and exits unobstructed</p>	<p>Duties of PIC: 91.02.8</p>	<p>The PIC is at all times responsible for the safety of the aircraft and crew.</p>	<p>Flight operation 91.02.8</p>	<p>Authority of PIC 91.02.8 The PIC has the authority over any person, to disembark or restrain, posing a hazard to safety of the flight The PIC shall ensure: a) The pre-flight inspection has been completed b) Decide whether or not to accept unserviceability permitted by the CDL or MEL (<i>unserviceability not permitted by the MEL may not be accepted</i>) c) Passengers are briefed prior to flight d) During take-off, landing and during turbulence or other emergencies requiring safety harnesses or belts, they are worn</p>	<p>Reporting Incidents 91.02.8</p>	<p>The pilot in command must in accordance with the appropriate regulations: a) Report any Dangerous goods incident in accordance with part 92 b) Report any unserviceable facilities to nearest ATCS c) Report any accident or incident involving the aircraft d) Report any ATIS incident near mss, or potentially dangerous condition e) Record any technical defect in the flight folio f) Report any occurrence of an unlawful interference with operation of the aircraft or the PIC to the director</p>
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Note on incident reporting:
 Incident reporting assists in accident prevention and enhancing aviation safety. Your information may help prevent another's misfortune. If you are concerned about repercussions of an incident report, use the confidential reporting systems, and if you happened to commit the misdemeanor or it is much better to own up now, combined with recommendations on how you aim to avoid in situation in future, rather than be seen trying to cover up an occurrence. So remember, if in doubt report!

Critical Phases of Flight

91.02.8

- a) Ensure the flight crew members are not required to do other than essential duties during critical phases of flight
- b) Not permit any activity that may distract flight crew during critical phases of flight
- c) Not continue beyond the nearest suitable aerodrome should a flight crew member become incapacitated

91.03 Documentation

Documents to be Carried

91.03.1

- a) Certificate of registration;
- b) Certificate of airworthiness;
- c) Certificate of safety or maintenance release;
- d) Aircraft radio station license;
- e) Aircraft mass and balance data (91.07.11);
- f) Crew licenses, ratings and medical certificates;
- g) A technical log, Flight folio or similar document;
- h) Approved aircraft flight manual (AFM) or pilot operating handbook (POH) (as specified in 91.03.2);
- i) A list of visual interception signals;
- j) A minimum equipment list if applicable;
- k) Noise certificate if applicable.

Documents for Cross Border Flights

91.03.1

- 1) Journey log book or general declaration (Gen-Dec);
- m) Cargo manifest, if applicable;

Aircraft Flight Manual

91.03.1

Every owner or operator shall have a CURRENT and APPROVED Aircraft Flight Manual (AFM) for each aircraft owned or operated. The aircraft shall be operated according to the AFM, unless an emergency dictates otherwise.

Checklists

91.03.3

The owner operator shall, where applicable, establish and make available to crew and other employees needing such information, a checklist system for use in all phases of operation.

Flight Plans

91.03.4

- a) Flights into or through controlled or advisory airspace except for:
 - i. a flight that takes off and lands at the same aerodrome without an intermediate landing and remains within a 50nm radius ("a local flight"),
 - ii. VFR flights into or out of an ATZ or CTZ from or to unmaned aerodromes without entering any other control or advisory airspace

<p>iii. flights crossing an airway or advisory route at right angles iv. flights exempted by the director b) IFR flights c) International flights d) All flights for the purpose of Commercial Air Transport, in terms of 121, 127, and 135 e) Flights requiring alerting services</p>	<p>shall be filed 30 minutes prior to departure, or if airborne 10 minutes prior to entering controlled airspace, and will be canceled 1hr after ETD if not activated. Variation of greater than 5% of flight planned TAS, and 3 minutes on reported ETA, ATS shall be notified. Flight plans provide valuable search and rescue information, it is courtesy to ATC and assists them in handling your flight expedition. With the exception of low level flights and local flights it is recommended you take time to file whenever you fly.</p>
<p>Flight Plan Recommendation</p>	<p>91.03.5 The owner, operator or PIC shall ensure that the aircraft carries a technical log or similar document (as per NAM-CATS).</p>
<p>Tech Logs</p>	<p>The technical log shall be legible and up to date, all entries made after completion of the relevant occurrence. Rectification of defects shall be certified by the person responsible for the maintenance. Technical logs shall be maintained by the owner or operator for a period of two years</p>
<p>Fuel and Oil Records</p>	<p>91.03.6 The PIC shall enter the fuel and oil records in the technical log (or similar document). Fuel and oil records shall be maintained by the owner or operator for a period of two years</p>
<p>Release to service</p>	<p>91.03.7 No owner, operator, or Pilot in Command shall operate a Namibian registered aircraft without a valid release to service signed by an appropriately rated engineer or an approved AMO. Certificate of release to Service shall be retained for a period of 12 months</p>
<p>Cockpit Voice Recorder (CVR)</p>	<p>91.03.8 When prescribed by director or following an incident or accident flight recorder data shall be kept for not less than 60 days, or until permission is given by the investigator in charge whichever is latter. Except for the purpose of accident and incident investigation or maintenance by the owner or operator, CVR's may only be used after consent of all the flight crew concerned. If used for maintenance the data must be deidentified or disclosed under secure procedures.</p>
<p>91.04 Instruments and Equipment</p>	
<p>Use of Equipment</p>	<p>91.04.1 Instruments required to be used shall be readily visible from his/her station with minimum deviation from the line of sight along the flight path</p>

Instruments required by more than one pilot must be readily seen from both pilot stations.
 Instruments shall have a means of indicating power supply (ie. suction gauge, Turn Indicator flag etc)

Circuit protection

91.04.2

The greater of 3 or 10% of each rating must be carried and accessible during flight.
 Fuses and circuit breakers essential to the safety of the flight must be readily accessible to allow for resetting or replacement during flight.
 No person shall deactivate a fuse in flight other than in accordance with the approved aircraft flight manual.

Lights

91.04.3

By day: anti collision lighting (no definition given)
 By night: (additionally)

- a) instrument lights
- b) passenger compartment lights
- c) one torch per crew member
- d) navigation lights in accordance with 91.06.10
- e) two independent landing lights or two separate filaments

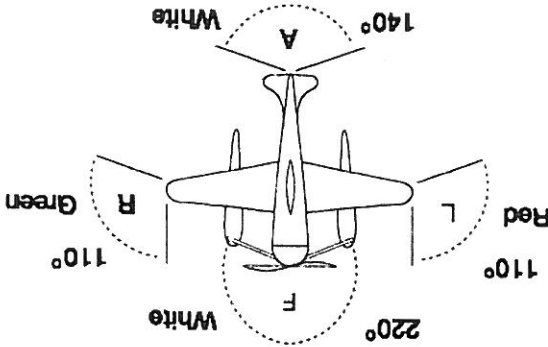
Navigation lights

91.06.10

The navigation or position lights must be as follows:

- Left: RED indicating from directly ahead through an angle of 110 degrees
- Right: GREEN indicating from directly ahead through an angle of 110 degrees
- Rear: WHITE indicating 70 degrees either side of the fore-aft (As depicted in the illustration below)

Navigation Lights Illustration (SACATS-OPS)



Equipment for VFR

91.04.4

For flight under VFR the aircraft must be equipped with:

- a) a magnetic compass
- b) a sensitive altimeter with an adjustable subscale calibrated in Hpa for barometric pressure
- c) a time piece with hours, minutes and seconds
- d) an airspeed indicator

icing

No PIC shall operate in known or forecast icing conditions unless:

91.04.9	1) The aircraft is certified for icing conditions 2&3) By night unless there is a means to detect or illuminate ice formation that does not cause any distracting glare or reflection. The PIC shall not permit the use of any electronic devices that may adversely affect performance	91.01.10	The director may identify devices that are allowed to be carried in the NAMCATS
Electronic Devices	91.01.10	The PIC shall not permit the use of any electronic devices that may adversely affect performance	91.01.10
Permitted Electronic Devices	91.01.10	Electronic devices that do not intentionally transmit any radio signals may, with the prior permission of the PIC be operated in cruise flight only. Examples of such are: laptops, electronic games, cameras, calculators, tape recorders.	91.01.10
CATS	91.01.10	Cellular Phones may not be used in any phase of flight.	91.01.10
CATS	91.01.10	<i>Note: When deemed necessary in the INTERESTS of SAFETY, for example a radio failure, the PIC may consider using a cellular phone (NB - CAT Ref 91.02.4 assumed incorrect)</i> Ref: 91.02.6.	91.01.10
First Aid Kits	91.04.17	No owner or operator or Pilot in Command shall operate an aircraft unless it is equipped with an appropriate first aid kit as prescribed in the NAMCATS, and the contents of such first aid kit is in a condition necessary for its intended use.	91.04.17
Requirements of the NAMCATS for First Aid Kits are included in the Appendix			
Hand Held Fire Extinguisher	91.04.21	No owner or operator or Pilot in Command shall operate an aircraft unless it is equipped with an appropriate	91.04.21
Crash Axes and Crowbars	91.04.22	No owner or operator or Pilot in Command shall operate an aircraft with a MCTOW greater than 5700kgs or a MAPSC of more than 9 seats unless it is equipped with at least one crash axe or crow bar located in the cockpit.	91.04.22
Fight Over Water	91.04.27 91.04.28	For: a) An aircraft not capable of maintaining light following a critical power failure flying greater than 10nm from shore (SA: 50nm) b) At an aerodrome where the take off or approach is over water 2) Life rafts must be carried for flights over water greater than: a) 120min normal cruise or 400nm for a four engine aircraft b) 90min normal cruise or 300nm for three engine aircraft c) 30min normal cruise or 100nm for all other aircraft	91.04.27 91.04.28
Survival equipment	91.04.29	Survival equipment (as prescribed in NAMCATS) is required when operating over areas where search and rescue would be difficult.	91.04.29
NAMCATS	91.04.29	Survival equipment shall include: 1. pyrotechnic signaling equipment capable of transmitting distress signals (IAW 91.06.12); 2. at least one ELT; 3. If further than 120 minutes single engine cruise for a multi engine or 30 minutes for single engine aircraft. Personal survival equipment	91.04.29

<p>including: a) 500ml/4 persons or part thereof on board; b) One Knife; c) First aid equipment; d) One set of air ground signaling codes; e) if polar conditions are expected additional equipment is required (not listed for relevance); 4. The location of the equipment must be placarded. 5. For purposes of this requirement areas where search and rescue is difficult are: a) Those designated by the state as such OR; b) Those that are largely uninhabited and no information is available to confirm search and rescue would not be difficult.</p>	<p>Windshield Wipers 91.04.31 No aircraft shall operate without windshield wipers or EQUIVALENT system, for each required pilot station, WHERE APPLICABLE</p>
<p>Any TCAS system installed shall be approved by the director. If the aircraft is equipped with a TCAS it shall be operational and turned ON. From 1 Jan 2003 TCAS is required in all commercial aircraft. Ref: 121.05.43 and 135.05.31.</p>	<p>TCAS 91.04.32</p>
<p>Although ATC is not equipped with Radar in Namibia, it is required that aircraft equipped with transponders squawk Mode C for other aircraft with TCAS.</p>	<p>Transponders AIP</p>
<p align="center">91.05 COMMUNICATION AND NAVIGATION EQUIPMENT</p>	
<p>Unless with prior approval of the director, aircraft shall be equipped with one two way radio capable of communication with an ATS unit and on 121.5MHZ</p>	<p>Communication Equipment 91.05.1</p>
<p>Navigation equipment shall not be required by flights operated under VFR providing they can be accomplished by VISUAL REFERENCE TO LANDMARKS</p>	<p>Navigation Equipment 91.05.2</p>
<p>Navigation equipment shall be carried enabling the aircraft to proceed according to flight plan for the route including one redundancy</p>	<p>Navigation Equipment Requirements CAR 91.05.1</p>
<p>The following minimum navigational equipment is required for IFR flights or VFR flights with no visible landmarks: • Two independent radio communication systems; • One VOR, ADF, DME and Marker Beacon receiving system; • Two ADF's if the route is dependent on ADF's; • Two VOR's if the route is dependent on VOR's;</p>	<p>Navigation Equipment Requirements CAR 91.05.1</p>
<p>• An ILS or MLS if required by an approach; • An area navigational system if required by the route; • SSR transponder equipment as required by the airspace.</p>	<p>Navigation Equipment Requirements CAR 91.05.1</p>

91.06.91.07: RULES OF THE AIR AND FLIGHT OPERATIONS

Rules of the Air: General

91.06.1	<p>Landings and Taking Off Landing or taking off on PUBLIC roads is allowed only:</p> <p>a) In an emergency involving the aircraft or occupants</p> <p>b) For purposes of saving human lives</p> <p>c) For law enforcement or civil defense</p>
91.07.3	<p>Use of Aerodromes No person shall use an aerodrome unless it is suitable for the type of aircraft and operation.</p>
91.07.3	<p>Night Flights Except in an emergency, no person shall use an aerodrome at night unless it is equipped with night flying facilities</p>
91.06.2	<p>Dropping of Objects No objects shall be dropped out of an aircraft except:</p> <p>a) sand or water used as ballast</p> <p>b) agricultural spray</p>
91.06.3-4	<p>Picking Up and Towing No objects shall be picked up or towed by an aircraft unless:</p> <p>a) with prior approval by the director</p> <p>b) if certified to do so in terms of the regulations</p>
91.06.5	<p>Towed Aircraft (excepting gliders): not higher than 150ft above the surface, not closer than 5km from an airfield boundary, and not above a public road</p>
91.06.6	<p>Formation Flights Formation flight may only be completed by prior arrangement of the PIC's of both aircraft, and not in such proximity to cause hazard and</p>
91.06.7	<p>Right Of Way Rules</p> <p>1) Power driven, heavier than air, aircraft shall give way to:</p> <p>a) Airships, gliders, balloons and other non powered aircraft.</p> <p><i>Note for other categories of aircraft: Priority for giving way is given to gliders, balloons, i.e balloons having full right of way over the others.</i></p> <p>b) aircraft towing other aircraft or objects, carrying undraining loads or engaged in winching operations, being towed or tethered;</p> <p>c) aircraft compelled to land or in an emergency situation;</p> <p>d) airborne aircraft if on the ground;</p> <p>And in other situations than (a) to (d) above:</p> <p>e) aircraft approaching or crossing from the right;</p> <p>f) aircraft lower if approaching to land;</p> <p>g) aircraft on final approach.</p> <p>2) Where avoiding action is required:</p> <p>a) Always after heading to the right for avoidance;</p> <p>b) Always pass to the right unless in a right hand circuit, where you should pass on the left (<i>ie. the outside</i>).</p>
91.06.11	<p>Taxi Rules (Right of Way Rules on the Ground)</p> <p>1) Taking aircraft give way to:</p> <p>a) aircraft taking off or landing;</p> <p>b) aircraft being towed by vehicles.</p> <p>2) Vehicles (unless towing aircraft) shall give way to all aircraft</p>

<p>91.06.19</p>	<p>Prohibited Areas Prohibited areas are designated by the director, in NOTAM, AIP, AIP SUP or AIC in terms of a height or altitude above the surface.</p>
<p>AIP</p>	<p>Vicinity Where no AT(A)(Z) is specified, operations in the vicinity of an aerodrome applies to aircraft within a 5nm Radius and up to a height of 2500ft AGL from the aerodrome.</p>
<p>91.06.12</p>	<p>Operation in the Vicinity of an Aerodrome Aircraft operating in the vicinity of an aerodrome shall: (a) Observe other traffic (b) Conform with or avoid the traffic pattern (c) Make all turns to left unless: i. the circuit is a right hand pattern, ii. you are otherwise instructed by ATC iii. you are in a helicopter (d) Land and take off into wind where possible (e) If not joining pattern fly across at not less than 2000ft AGL, or if less conform with the pattern. (f) Maintain listening watch on appropriate frequency and comply with all ATC instructions.</p>
<p>91.06.9</p>	<p>Speed Restrictions Aircraft may not fly at a speed greater than: 1) Outside controlled airspace, below FL100, unless authorized or required by director, 250kts. 2) In a CTZ or ATZ, unless authorized or required by ATS. a) 200kts for turbine powered aircraft; b) 160kts for piston powered aircraft.</p>
<p>91.06.8</p>	<p>Line Features When flying below 1500ft, and within 1nm of a line feature (such as a road, railway or coastline) keep to the right of the line feature unless otherwise instructed by an ATS unit.</p>
<p>91.01.3</p>	<p>Taxiing No-one shall taxi an aeroplane without a) a valid air crew license, OR b) a declaration of competency by an instructor or authorised person, AND c) If radio transmission are required, a radio license, AND d) being aware of all required procedures (aerodrome layout, signals, markings, right of way etc)</p>
	<p>3) The landing area should be cleared as soon as safely possible. 4) For avoiding action: a) Slow or stop; b) After heading to right and pass on right; c) Avoid crossing ahead of other traffic. 5) Vehicles should keep to the right side of runway or taxiway</p>



2 (a) Prohibition of landing:
A horizontal red square panel with yellow diagonals when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Visual Ground Signals
NAMCATS 91.06.12
When displayed at an aerodrome the following signals shall be adhered to and shall have the meanings described below.

This information has been submitted from the CATS diagram, the SACATS, and the ANRs. The NAMCATS contain a difference between the published information in the table and diagram.

Note

Steady Red on Final
Notwithstanding any previous instructions do approach

Flashing White:
Land at this aerodrome Return to starting point and return to the starting point

Flashing Red:
Aerodrome unsafe (do not land) Clear runway

Steady red:
Give way (continue Stop circling)

Flashing green:
Return for landing Cleared to taxi

Steady Green:
Cleared to land Cleared to take-off

Light Signals
NAMCATS 91.06.13

Light **Air:** **Ground**

The PIC upon receiving any of the signals prescribed in the NAMCATS shall take such action as required by the interpretation.

Communication

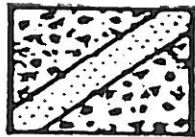
Note: This is the wording stated in the NAMCATs, it is assumed that the words "except with consideration of the associated danger" have been unintentionally omitted. Danger areas include the General Flying Areas and other such areas in common use.

Danger Areas
91.6.21
Danger areas are designated by the director, in NOTAM, AIP, AIP SUP or AIC. The nature of the danger will always be stated. Danger Areas MAY NOT be flown into.

Restricted Areas
91.06.20
Restricted areas are designated by the director, in NOTAM, AIP, AIP SUP or AIC. The nature of the restriction will always be stated. Flights into restricted areas are only IN COMPLIANCE WITH terms of the RESTRICTION

Prohibited airspace MAY NOT be flown into.

(b) Need for special precautions while approaching or landing:
 A horizontal red square panel with one yellow diagonal when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.



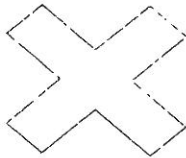
(c) Use of runways and taxiways:
 • A horizontal white dumb-bell when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.



• The same horizontal white dumb-bell but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

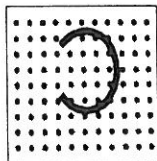


(d) Closed runways or taxiways:
 • Closed runways or taxiways: Crosses of a single contrasting colour, yellow or white, displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

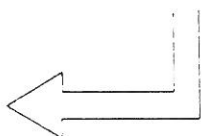


(e) Directions for landing or take-off:
 • Directions for landing or take-off: A horizontal white or orange landing 'T' indicates the direction to be used by aircraft for landing and take-off, which must be in a direction

(h) Glider lights in operation:
 A double white cross displayed horizontally in the signal area indicates that the aerodrome is being used by gliders and that glider lights are being performed.



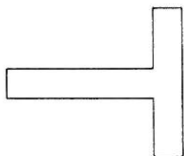
(g) Air traffic services reporting office:
 The letter C displayed vertically in black against a yellow background indicates the location of the air traffic services reporting office.



(f) Right-hand traffic:
 When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour indicates that turns are to be made to the right before landing and after take-off.

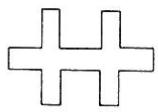


• A set of two digits displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

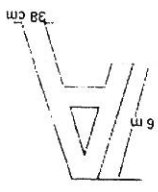


parallel to the shaft of the T towards the cross arm.
 Note: When used at night, the landing T is either illuminated or outlined in white coloured lights.

<p>Pyrotechnic Signals CAIS 91.06.13</p>	<p>A series of projectiles at 10 second intervals each showing red or green lights or stars will indicate the aircraft is about to enter a restricted, prohibited or danger area and remedial action should be taken.</p> <p>It is the responsibility of the PIC to ensure in controlled airspace, advisory airspace, at Compulsory Reporting Points, where an alerting service is provided, at intervals requested by ATC, or published by the director (IATP) the appropriate position reporting is carried out, giving passing level and time and any other meteorological or required information</p> <p>In controlled airspace a continuous listening watch, and two way radio communications is maintained, unless prior arrangement has been made, or in compliance with the radio failure procedures</p> <p>ATS may permit non radio equipped aircraft in airspace at their discretion and conditions</p> <p>In advisory airspace where two way radio cannot be maintained blind transmissions shall be made, until it can be re-established</p>
<p>Mandatory Radio Communication 91.06.15 91.06.16 91.06.17 91.06.32</p>	<p>ATC may give priority to aircraft operating under a flight plan.</p> <p>Loss of Communications If flight plan filed and activated aircraft may continue in controlled or advisory airspace in accordance with the radio failure procedures.</p> <p>91.06.32 When joining an aerodrome circuit, unless in prior contact with ATC make a circuit of aerodrome to observe traffic and visual signals before landing.</p>



(1) Agricultural lights in operation:
A figure A in the signal area indicates that the aerodrome is being used for agricultural lights.



1. VFR flight shall be conducted:
 (a) By day with visual reference to identifiable objects on the ground
 (b) At night
 i. 7 days before or after full moon from 15 minutes after moon rise

VFR: Visual Flight Rules

Series 4
 Over-flying landing site 1000ft to Landing site not suitable
 2000ft AGL with gear up
 and rocking wings

Response to Series 1, 2 or 3
 Rock wings, steady landing light Acknowledged

Series 3
 Over flying landing site Land here

Series 2
 An abrupt breakaway Proceed

Followed by a slow turn to desired course

• Ahead to right Follow me to landing site

• Ahead to left Follow me away from prohibited/restricted area

Series 1
 Rocking wings and at night flashing navigation or landing light

AIP/ CATS
 Series 1-4 interception signals to use are as prescribed in NAM CATS and the AIP:

Interception 91.06.30
 Attempt to establish contact on 121.5, if no contact:
 a) Use 2nd series to indicate aircraft to proceed;
 b) Use 1st then 2nd series as appropriate to lead away from restricted or prohibited area;
 c) Use 1st then 3rd series as appropriate to indicate landing area, then interceptor to use 4th series if necessary;
 d) Use distress signals if in distress.
 are detailed below.

91.06.31
 a) operate in accordance with and not contrary to any ATC clearance OR obtain an amended clearance
 b) if deviation is required in exceptional circumstances notify ATC as soon as practicable (eg in an emergency or in interests of safety)

Compliance with ATC 91.06.18
 The PIC shall:

Chapter 5
CATS 06.16 Radio Failure is in accordance with ICAO, Annex 10, Volume II,

- (i.e. Applies to all VFR flights)*
- In the event of a loss of radio communications
 - Squawk 7600
 - Continue to make blind transmissions
 - If in VMC, remain in VMC and land at nearest SUITABLE aerodrome and report to ATC AS SOON AS POSSIBLE

Responsibility to Maintain VFR
91.06.24-25

Outside a CTZ, ATZ or ATA the PIC shall be responsible for ascertaining whether VFR conditions exist. Above FL200 or below VFR requirements aircraft may continue either in accordance with IFR or not at all.

***Part 91 specifies a "ceiling" of 3km, this is taken from the same paragraph in Part 135/121: 08.13, it is assumed to be an error*

**This reference to increased minima for takeoff SVFR is not applicable in SA, although it is considered advisable. SVFR is there to allow an aircraft to land, and should not be considered for planning to depart unless the weather extremely isolated, i.e. if you are on the ground and the weather is bad – stay on the ground!*

3km, and not continued unless weather above SVFR or VFR minima as applicable

91.07.10

VFR Operating Minima

Part 6
VFR flights shall be operated according to visual flight rules prescribed in

SVFR flights: should not be commenced*if the visibility** is less than 3km, and not continued unless weather above SVFR or VFR minima as applicable
visibility not less than 1500m.

91.06.23

Special VFR

SVFR may be permitted in a CONTROL ZONE, only in provision with ATC clearance, clear of cloud, by day, with base not less than 500ft, visibility not less than 1500m.

It is thought the reference to visibility in the NAMCARs has been misprinted, the application below should be adhered to.

a) flight visibilities reduced to not less than 1500 m may be permitted for flights operating:
1) at speeds that, in the prevailing visibility, 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 volume traffic and for aerial work at low levels.

With regard to visibility below 1500m as specified in 91.06.22, the following excerpt has been copied from the same table in ICAO Annex II, paragraph 3.9.

Fight Visibility, ICAO Annex II, 3.9.

Author opinion – it is impossible for flight in visibilities below 1500m for aircraft incapable of hover to make collision with terrain or other aircraft unlikely
2. Flight in class G may be authorised by ATC below 1500m in areas of low traffic and at speeds or situations that make collision (aircraft/terrain) unlikely.

(d) Under flight visibility and distance from cloud as prescribed in NAMCATS
(e) At no time above more than 3/8 cloud within 5m radius
ii. with visual reference to identifiable objects on the ground

till 15 minutes before moon set OR

Minimum Heights	Except when necessary for take-off or landing or with prior approval of the director, Not less than: 1 1000ft above obstacles within 2000ft Radius over built up area or
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Heights and Operating Levels

*Part 91 specifies a "ceiling" of 3km, this is taken from the same paragraph in Part 135, it is assumed to be an error

VFR Operating	VFR flights shall be operated according to visual flight rules prescribed in Part 6
Minimum	SVFR flights: should not be commenced if the visibility* is less than 3km, and not continued unless weather above SVFR or VFR minima as applicable
	91.07.10

Met Conditions	No flight operating under VFR shall takeoff unless forecasts/reports or combination indicate along the entire route compliance with VFR is possible
	91.07.9

Note
CATS over-ride AIP information.
However the table provided on Part 91 detailed above is not clear as it appears to have information missing, it is anticipated the AIP will be amended to reflect important changes. Met minima need not be memorized rather used for operational and planning purposes.

CATS	In Namibia: Class C,D controlled airspace, Class F, G uncontrolled
	Class A: IFR only
	Class F, G
	Clear of cloud
	5km
	Class C,D,E:
	1500m Horizontally, 300m /1000ft vertically
	Clear of cloud
	<10,000ft 5km
	>10,000ft 8km
	Class B:
	Clear of cloud
	Distance from cloud
	Visibility:
	Above FL100
	8km
	1000ft/1.5km
	none

VFR Met Minima (Aeroplanes)	AIRSPACE	Visibility	Cloud, ↑ →	Ceiling
	CTZ/ATZ	5km	500ft/2000ft	1500ft
	Entering or Leaving a CTZ/ATZ	5km	Clear	500ft
	Below 1000ft	1.5 km	Clear	none
	AGL day			
	1000ft AGL	5km	500ft/2000ft	none
	day/1500ft			
	night to FL 100			

<p>AIC, (reprinted from Conservation Law)</p> <p>v. 3000ft (1000m) over a game reserve</p> <p>vi. 1500ft over a bird sanctuary</p>	<p>Recommendation</p> <p>vii. 5000ft recommended when overflying an active firing range</p>	<p>Aerobatics</p> <p>91.07.28</p> <p>viii. 4000ft above an aerodrome, and elsewhere not below 2000ft on recovery.</p>	<p>Transition Altitude and Level</p> <p>Outside 25nm of controlled airfields:</p> <p>Transition Altitude: VMC 2000ft AGL or IMC Minimum Safe Cruising Altitude, Transition level: VMC 3000ft, IMC MSCA+500ft, Within 25nm of a controlled airfield transition altitude as published in the AIP, transition level advised by ATC</p> <p><i>The transition level is not published as it must be 1000ft above QNE</i></p> <p><i>Transition Altitude and so can change when the QNH drops below</i></p>	<p>Transition Altitude and Level</p> <p>Flight above transition altitude shall be with respect to flight levels, flight below transition level shall be with respect to altitude.</p> <p>Pilots may change to QNE or QNH on reaching Transition Altitude or Transition Level respectively without notifying AIC.</p>	<p>Semi Circular Rule</p> <p>91.06.34</p> <p>Aircraft in level flight shall maintain an appropriate flight level as selected according to their magnetic track from the table in the NAMCATS, unless otherwise directed by an ATS unit or VFR below 1500ft AGL.</p>	<p>Semi Circular Levels</p> <p>CATS 91.06.34/AIP</p> <p>Above 1500ft AGL to FL200, outside controlled airspace:</p> <p>000-179² VFR odd flight levels +500ft, IFR odd flight levels 180-359² VFR even flight levels +500ft, IFR even flight levels</p> <p><i>(East odd, West even)</i></p>	<p>Up to FL290, Thereafter</p> <p>000-179: 330, 370...</p> <p>180-359: 310, 350, 390, ...</p> <p>Low level flight (less than 1500ft AGL): at the discretion of the PIC</p> <p>Controlled flight: at the discretion of the controller</p> <p>Flight above FL200 IFR only.</p>	<p>Corridors and routes:</p> <p>1) When flying within a track approximately directly north of Windhoek or on the R987F:</p> <p>North Even flight levels, South Odd flight levels.</p>
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open air assembly

ii 3000ft over open air assembly if circling or repeated passes

iii Else where, when not specified not below 500ft above ground or water.

Mass and Balance	<p>If mass and balance documentation is required it must be countersigned by the PIC, unless submitted by electronic data transfer, where commencement of the flight is deemed acceptance thereof.</p>	Mass and Balance Documentation
Mass and Balance	<p>The PIC shall ensure that the loading and center of gravity is within limits specified in the approved flight manual.</p> <p>Load sheet requirements are as prescribed in NAMCATS.</p> <p><i>A Load sheet is strongly recommended particularly if the loading of the aircraft is in doubt.</i></p>	<p>Passenger, baggage and fuel masses shall be determined by actual weighing or by using standard masses in accordance with the NAMCATS.</p> <p>The OPERATOR must establish mass and balance documentation prior to each flight, specifying the load and its distribution.</p> <p>Acceptance of the load by the PIC must be indicated by countersignature or equivalent.</p> <p><i>Where no operator is applicable this term can invariably mean PIC.</i></p>
Mass and Balance	<p>The corridor is formed by coordinates approximate to FYWE, FYWH, FYOA and FYOS, and includes the track from FYWE to FYOW.</p> <p>2) When flying approximately directly South of Windhoek or on R987D (WH-KT): North Odd flight levels South Even flight levels</p> <p><i>These rules are applied by ATS to assist with neighbouring countries' requirements, and tracks that fall very close to the border line of the semicircular rule. If in doubt about your flight level check with the local ATS unit or Flight Briefing Office.</i></p>	<p>Aircraft empty weight includes oil and unusable fuel.</p> <p>Aircraft mass shall be established by weighing every 5 years. Additions and subtractions may be calculated if actual mass is known.</p> <p>Passenger, baggage and fuel masses shall be determined by actual weighing or by using standard masses in accordance with the NAMCATS.</p> <p>The OPERATOR must establish mass and balance documentation prior to each flight, specifying the load and its distribution.</p> <p>Acceptance of the load by the PIC must be indicated by countersignature or equivalent.</p> <p><i>Where no operator is applicable this term can invariably mean PIC.</i></p> <p>Standard passenger mass was previously specified as 180lbs in the AIP. The CATS now detail specific weights depending on seating configurations as outlined below.</p> <p><i>Actual weighing is recommended for light aircraft.</i></p>

Standard Masses
CATS 91.07.11

Passenger Seats	Male (kgs)	Female (kgs)
1-9	96	78
10-19	92	74
20-29	88	70
More than 30	88	
Flight crew	85	
Cabin crew	75	
Children	35	
Up to 19 seats	If no hand luggage except cameras and coats subtract 6kgs	
Less than 20 seats	Actual weighing of all checked bags required	
20 seats or more	11 kgs domestic, 15 kgs international	
For less than 6 passenger seats weights may be replaced by verbal statement or pilot estimation.		

Fuel

Fuel Reserves

91.07.12

The PIC must carry sufficient fuel and oil to safely complete the flight considering:

- Meteorological conditions;
- EXPECTED delays;
- (eg. ATC, traffic, unscheduled VIP movement)
- Fuel and oil requirements of NAMCATS.

Fuel and Oil

91.07.12

For flights in accordance with IFR sufficient fuel must be carried for the planned flight, and

1) Thereafter for a period of 45 minutes, OR;

2) If an alternate is required, hence to an alternate, and thereafter for a period of 45 minutes.

No IFR reserve is given in NAMCATS the above has been assumed to apply to both IFR and VFR.

SACATS91

The following applies to all SA flights included for interest only. It presently only applicable to NAM commercial flights

Fuel shall include:

- a) taxi;
- b) trip;
- c) reserve;

- i. contingency,
- ii. final reserve

iii. fuel to alternate fuel or two hours island reserve if no

Carriage of Persons	Seating
<p>The PIC shall ensure</p> <ol style="list-style-type: none"> 1) Before Take-off, landing and when deemed necessary all passengers must have seat belts fastened 2) No multiple occupancy except by one adult and one infant who is properly secured by a child restraint device. 3) Passengers shall be seated where they may best assist and not hinder emergency evacuation 	<p>91.07.18-19</p>

Refueling and Defueling	91.07.13
<p>Refueling and De-fueling while passengers are on board, embarking or disembarking:</p> <p>May not be completed with AVGAS or wide cut fuel</p> <p>Other types may be permitted if manned by qualified personnel ready to evacuate if necessary.</p>	<p>91.07.13</p>

In flight re-planning fuel comprises:

The greater of total fuel from the requirements above to the destination or en-route alternate (via in-flight re-planning point) with the below contingency fuel.

Contingency calculated as 5% from the in flight re-planning point to destination and 3% from departure to the en-route alternate

Final Reserve Isolated Aerodromes ("Island reserve"):

Piston the lesser of 45 minutes plus 15% of cruise time or 2 hours

Turbine 2 hours.

Final Reserve fuel is:

Piston 45 minutes cruise, or turbine 30 minutes holding at 1500ftAGL overhead destination, in standard conditions OR

MAP, climb from MAP to cruise, cruise to alternate, descent to IAF, approach and landing.

Alternate fuel shall comprise:

Contingency fuel shall comprise:

EITHER: 5% trip fuel, or 15 minutes holding at 1500ftAGL at destination or 20 minutes flight time but only with approval of a fuel monitoring program

OR: 5 minutes at holding speed in standard conditions whichever is higher

Additional fuel shall comprise:

15 minutes holding at the destination if no destination alternate is carried, or fuel to allow for an increase in fuel consumption due to in-flight failure (a critical power unit or pressurisation) at the most critical point.

Alternate fuel shall comprise:

MAP, climb from MAP to cruise, cruise to alternate, descent to IAF, approach and landing.

Final Reserve fuel is:

Piston 45 minutes cruise, or turbine 30 minutes holding at 1500ftAGL overhead destination, in standard conditions OR

Final Reserve Isolated Aerodromes ("Island reserve"):

Piston the lesser of 45 minutes plus 15% of cruise time or 2 hours

Turbine 2 hours.

In flight re-planning fuel comprises:

The greater of total fuel from the requirements above to the destination or en-route alternate (via in-flight re-planning point) with the below contingency fuel.

Contingency calculated as 5% from the in flight re-planning point to destination and 3% from departure to the en-route alternate

Refueling and De-fueling while passengers are on board, embarking or disembarking:

May not be completed with AVGAS or wide cut fuel

Other types may be permitted if manned by qualified personnel ready to evacuate if necessary.

Passenger Briefing

One seat or berth must be provided for each passenger two years old or more with a safety belt.

A child restraint device for each infant (less than 2yrs).

Safety harness or belt with diagonal strap, with torso restraint under rapid deceleration for every flight crew member.

A means of indicating to passengers that safety belts must be fastened if seats cannot be seen from flight deck.

Passengers shall be briefed on:

- a) safety matters;
- And before take off and before landing:
 - a) prohibition of smoking;
 - b) when to put seat upright and stow tray table;
 - c) location of escape markings and emergency exits;
 - d) stowage of baggage;
 - e) restrictions of electronic devices;
 - f) seat belts;
 - g) If applicable;
 - h) oxygen;
 - i) life jackets.

Method of Carriage

91.01.7 No person shall be carried in an area not designed for accommodation of persons unless temporary permission has been granted by the PIC.

91.01.8 No person shall be allowed on the flight deck unless

- 1) with permission of the PIC;
- 2) they shall not interfere with operation of the aircraft;
- 3) they are made familiar with applicable procedures.

Oxygen

91.02.8 The PIC must ensure oxygen is available for to crew members and passengers on flights in non pressurised aircraft:

- a) Between 10,000 and 12,000 for greater than 60 minutes;
- b) Above 12,000.

Supplemental Oxygen

91.04.18, 91.04.19 Supplemental oxygen required for all pressurised aircraft and for non pressurised aircraft operating between 10,000 and 12,000 for more than 60min or above 12,000.

Requirements for Supplemental Oxygen are as prescribed in the NAM CATS.

Oxygen requirements in CATS 91.04.17-19 are quite detailed and considered outside the scope of PPL syllabus.

91.07.23

The PIC must ensure crew performing essential duties use supplemental oxygen continuously when operating between 10000ft and 12000ft greater than 60minutes and above 12000ft without pressurization.

The PIC must ensure oxygen is available for to crew members and PIC Responsibility

91.02.8	Oxygen passengers on flights in non pressurised aircraft: a) Between 10,000 and 12,000 for greater than 60 minutes; b) Above 12,000.	Additional Oxygen Requirements	Additional requirements for carrying oxygen apply to larger aircraft, aircraft carrying cabin crew, or flying at high altitudes, and have not been included for relevance. 91.04.2, 91.04.17, 91.07.23.
Flight Operating Rules			
91.07.1-2,3,5,7	The owner, operator or PIC shall ensure the routes and areas, aerodromes, alternate aerodromes and selected minimum flight altitudes to be used are authorized for use, and comply with the minimum performance and safety requirements of the operation.	Met Conditions	The pilot or operator shall ensure that all considerations are made and all routes, MFAs and Aerodrome's are adequate for the planned operation, including all appropriate state or foreign minima.
91.07.9	No flight shall take off OR continue beyond an in flight decision point unless information is available to indicate at the destination and at the alternate the weather is above aerodrome operating minima (Aerodrome Operating Minima: the higher of operator, pilot, airport or state minima).	Smoking	Smoking shall not be permitted in a Nambian registered aircraft or an aircraft taking off and landing in Namibia while carrying passengers.
91.07.14	In other cases Smoking shall not be permitted during: a) Take-off, approach and landing; b) During any ground operations; c) Whenever required by the flight manual or operator.	Search and Rescue	The PIC shall not commence the flight unless sufficient information for alerting action is available if required.
91.01.5	Operator or PIC of a flight which S&R has been requested and fails to comply with the requirements shall be responsible for costs incurred. not less than N\$500.	Search and rescue Information	The owner, operator, or PIC shall ensure information concerning search and rescue services of the area to be flown over is carried on board.
AIP GEN 1.5	Symbols to be used in search and rescue for ground to air signaling shall be at least 2.5m at 3m spacing, as follows:	Ground to Air Signaling	V – Require assistance X – Require Medical Assistance N – No or Negative Y – Yes or Affirmative P – Proceed in this direction

Emergency Simulation	91.07.26	No person shall simulate an emergency affecting flight characteristics while passengers are on board.
Starting Engines	91.07.27	A competent person must be at the controls when an engine is started. If the PIC is the only competent person present he/she must use brakes.
Aerobatics	91.07.28	<p>SACAR: "unless the brakes are serviceable and fully applied, chocks shall be used, and a competent person seated at the controls. If chocks must be used and the PIC is the only competent person present he/she shall ensure that the controls are left for the shortest time possible."</p> <p><i>Note: This is possibly what was intended by the NAMCAR's reference to use of brakes.</i></p> <p>Unless prior approval by director, not to be carried out:</p> <ol style="list-style-type: none"> i. In the vicinity of ATS routes; ii. within 5nm of an aerodrome unless above 4000ft; iii. over populated areas or gatherings; iv. below 2000ft AGL on completion.
91.10 Maintenance		
No aircraft shall be operated unless it is maintained within the provisions of Part 43		

AIP Information

For operational purposes pilots should be familiar with the information contained in the IAP. Other useful information to be found in the AIP includes:

Units of measurement and standard conversions

Abbreviations

Chart symbols

Location indicators

Sunrise and Sunset times

ATS information and contact numbers

Relevant parts of the regulations relating to operations

VFR operating minima (as included)

Airspace classifications and standards

Special airspace: danger, restricted, prohibited and training areas, their nature and limitations

Obstacles and hazards to air navigation

Aerodrome Plates and information (licensed airfields)

The integrity of the AIP information is guaranteed by the director for operational use. There are many other useful aviation publications available, for obtaining information not contained in the IAP (eg. unlicensed airfield data), however it should be remembered that the information is not guaranteed and should be confirmed before using wherever possible.

APPENDIX

PPL examinations are developed by individual flight schools and so may vary considerably in content, however the information included in the appendix is for interest or reference purposes only and not normally considered examinable.

Appendix 1: Flight Training Air Law

The following sections detail the Namibian training syllabus and guidelines, from the ANRs, these numbering sequences may be still used by many organisations for indicating exercises completed during training.

Part 141 does not include a training syllabus or guidelines at this point, training organisations are required to develop their own and submit it to DCA for approval. Your training provider should have an operations manual that contains information similar to that detailed below.

Flight Instruction Syllabus

Seq. Exercises	Exercise 18, 24, 25, and 26 are not required for PPL. The sequence numbers are those used for logging training flights
1	Cockpit layout Cockpit drill, gauges, controls, emergency equipment
2	Preparation for flight External checks Internal checks Starting Pre-flight checks Engine run up checks During flight checks
3	Flight experience Introduction to the air experience, first flight Primary effects of control application Further effect of control application Stream effects
5	Taxiing Ground handling
6	Straight and level flight Maintain a constant direction and altitude, in various configurations
7	Climbing Maintaining a climb in a constant direction, in various configurations: with flap and without flap, different speeds
8	Descending Maintaining a constant direction descent, in various configurations: power off glide, power on cruise descent, descent with flaps and gear
9	Stalling Stalling in various configurations: power off, cruise power, reduced power, climb with power off, with flaps and gear
10	Medium level turns Turning at +/-30 degrees, level, in balance, left and right
11	Non level turns Climbing and descending turns
12	Take-off take-off, take off checks, EFATO procedures (take off emergencies)

Training and Flight Schools	
13	Approach and landing Approach and landing including the go round, re-circuit and emergencies
14	Spinning Full spins and incipient spins (recovery after the wing drop)
15	First solo Before first solo a student must 1. Show proficiency in Exercises 1-14 2. Be capable of a reasonable attempt at a elementary forced landing (i.e. complete a glide approach) 3. Know emergency procedures including exercise 23
16	Side shipping Side slips including: effects of control, straight slip, cross-wind slip, shipping turn
17	Steep turns Turns at 45 degrees or more: with and without engine power
18	Instrument flying Normal flight maneuvers and recovery from unusual attitudes with sole use of instruments.
19	Low flying Low flying in the GFA: dual exercise only, including effects of wind, drift, apparent slip and skid.
20	Cross-wind take off and landing Take off and landing out of wind
21	Precautionary landing Procedures for landing at a field or area not intended for landing or destination: including inspection of a landing site, and short-field approach and landing
22	Forced landing Procedures in the event of an engine failure en-route or above 1000ft AGL.
23	Emergency procedures Action in the event of a fire
24	Asymmetric flight Multi-engine aircraft, simulated or actual operation on one engine
25	Aerobatics Loops, stall turns, half roll, slow roll, barrel roll, half roll off the top of a loop (immelman), inverted flight
26	Night flight Flying in the hours between 15 minutes after sunset, and 15 minutes before sunrise
27	Cross country Navigation Dual triangular cross country flight of not less than 100nm Solo triangular cross country of not less than 100nm but not more than 100nm from base at any time Test cross country of not less than 200nm, not less than 50nm from base, with at least three full stop landings, including the departure aerodrome, of which at one an ATIS must be in operation, during flight the following shall be demonstrated: Interception of QDM/QDR or radials, use of Nav, aids and radio Adherence to flight plan terms of position and time
7.1	Authority No training must be conducted outside an Air Training Services License without written permission from the director

Training rules
 Flight training organisations shall have a copy of the local and flight school rules, submitted to DCA and available to students at all times

GFA
 A map of the GFA shall be displayed in the flight school office

7.6 Flight Authorisation
 All students must be signed out for each flight in the presence of an instructor

7.5 CFI responsibility
 The CFI must ensure:

- Authorisation sheets are completed
- Flying disciplines are maintained
- Ground instruction standards are maintained
- Dual check flights are completed every 10 hours of a students training
- Logbooks are signed out prior to solo flight solo, GFA flight, and solo Navigation
- Students and pilots logbooks are maintained according to the ANR chapter 8
- Training records are maintained correctly and up to date
- Safety equipment is maintained and readily accessible

7.7 Low flying
 Students may complete low flying DUAL only

7.8 Communication
 Adequate communication between instructors and students must be available

7.9 FLWOP
 If an actual FLWOP is carried out by a student, only a CPL may fly the aircraft out (if serviceable) and only after DCA inspection

Appendix 2: Log Book summaries

All applications to the Directorate of Civil Aviation need to be accompanied by a logbook summary. This includes all license renewals and upgrades, and ratings (excluding the addition of a type to a group). This requirement is usually indicated on the top of the DCA application form submitted with the application.

Summary Example

An example of the correct format for a log book summary is detailed in AIC 30.3, as shown opposite.

The period summarised should be clearly displayed in the title, in this example the dates have been left blank.

Debate often arises over which type rating times to include. From the example shown, times need only be indicated for the period summarised (ie the single engine dual time indicated is only 2 hours on a PA28, however total dual times is 40.15 hours).

The times for the period are totalled beneath the summary displayed at the bottom of the page as usual.

A summary should be signed by the pilot completing the summary, and certified as correct by a flight instructor (not necessarily the one who has completed the test). A log book summary is accepted in the form of a sticker or paper glued into the logbook, although direct entry is considered better practise.

Remember the log book summary submitted to DCA forms part of your legally represented hours should

TV 2112

Date	Type	Reg. No.	Pilot	Multi-engine aircraft						Single-engine aircraft						Instrument flying				Flown as a pilot													
				Day	Hour	Alt	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time													
27	C159	CAR	SCU	2.00	17.00	1.00	3.20	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05
TOTALS				2.20	17.20	1.00	3.55	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05
SIGNATURE OF PILOT																																	
NAME OF INSTRUCTOR																																	
SIGNATURE OF INSTRUCTOR																																	
Grand Total (of this entry)				40.15	17.20	1.00	3.55	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05	1.00	17.05		

Number of passenger seats installed	Number of standard first aid kits required
0 to 99	1
100 to 199	2
200 to 299	3
300 and more	4

Appendix 3: NAMCATS 91 Standard first aid kits

your original log book go missing.

(1) The following must be included in the first aid kit:

- (a) Bandage (unspecified);
- (b) burn dressings (unspecified);
- (c) wound dressings, large and small;
- (d) adhesive tape, safety pins and scissors;
- (e) small adhesive dressings;
- (f) antiseptic wound cleaner;
- (g) adhesive wound closures;
- (h) adhesive tape;
- (i) disposable resuscitation aid;
- (j) simple analgesic e.g. paracetamol;
- (k) antiemetic e.g. cinnarizine;
- (l) nasal decongestant;
- (m) first aid handbook;
- (n) splints, suitable for upper and lower limbs;
- (o) gastrointestinal antacid +;
- (p) anti-diarrhoeal medication e.g. loperamide +;
- (q) ground/air visual signal code for use by survivors;
- (r) disposable glove; and
- (s) a list of contents in at least 2 languages (English and one other). This should include information on the effects and side effects of drugs carried.

Note 1: An eye irrigator whilst not required to be carried in the first aid kit should, where possible, be available for use on the ground.

Note 2: + indicates aircraft with more than 9 passenger seats installed.

(2) Unless the standard first aid kit is clearly visible, its location must be indicated by a placard or sign, and appropriate symbols may be used to supplement the placard or sign.

(3) An owner or operator must ensure that the standard first aid kit is readily accessible for use.

(4) An aircraft must be equipped with the following number of standard first aid kits:

Sample Exam Questions:

- 1) In the regulations night is defined as:
 - a) the period from sunset to sunrise
 - b) the period from 15 minutes before sunset to 15 minutes after sunrise
 - c) the period from 15 minutes after sunset to 15 minutes before sunrise
- 2) For a Private pilot, group type ratings must be renewed:
 - a) every two years
 - b) every year
 - c) initially after one year, thereafter every two years
- 3) Flight time is defined as
 - a) from the time the aircraft first moves under its own power for the purposes of taking off until the time it comes to rest at the end of the flight
 - b) from the time it first moves under its own power until the time it lands again
 - c) From the time it commences the takes off roll until the time it lands again
- 4) A NOTAM is a
 - a) notice distributed by means of telecommunications containing important information concerning the operation of aircraft
 - b) A notice issued by the director
 - c) A document containing supplementary information to the Civil Aviation Regulations
- 5) A small aeroplane is defined as having a maximum certified mass of :
 - a) Less than 2700kgs
 - b) Less than 5700kgs
 - c) Less than 1600kgs
- 6) The maximum flight hours a pilot may fly in one 24 hour period is:
 - a) 8hrs
 - b) 6hrs
 - c) 12hrs
- 7) The maximum flight hours a pilot may fly in any consecutive 7 day period is
 - a) 32hrs
 - b) 28hrs
 - c)there is no limit
- 8) The maximum flight hours a pilot may fly in one calendar year is
 - a) 1000 hrs
 - b) 900hrs
 - c)1200hrs
- 9) A pilot may deviate from the regulations:
 - a) in the interests of safety
 - b) in the best interests of the country
 - c)at the request of the passengers

- 10) If a pilot deviates from the regulations he/she must notify
 - a) The director as soon as practical
 - b) The police
 - c) The nearest ATS unit
- 11) When checking the serviceability of aeronautical facilities you would consult:
 - a) The AIC and CATS
 - b) The AIP and AIC
 - c) The NOTAMS, AIP and AIP supplements
- 12) When is a public road allowed to be used as a place of landing:
 - a) in an emergency only
 - b) when approved by the director
 - c) for civil defense, in an emergency or for the purpose of saving human lives
- 13) When two aircraft are approaching from approximately head on positions, what evasive actions should they take
 - a) Both alter heading to the right
 - b) Both alter heading to the left
 - c) The slower aircraft shall maintain track, the faster aircraft shall turn to the right
- 14) When flying low level (below 1500ft) and following a line feature (coast/ridge/road etc), outside controller airspace, what procedure should be adhered to
 - a) keep to the left of the line feature
 - b) keep to the right of the line feature
 - c) fly directly above the line feature
- 15) The semi-circular rule for magnetic track applies when:
 - a) inside controlled airspace and above 1500ft
 - b) outside controlled airspace and above 1500ft
 - c) in advisory airspace and between 7500ft and FL100
- 16) Under normal circumstances the maximum speed for a piston aircraft within a control zone is:
 - a) 180kts
 - b) 200kts
 - c) 160kts
- 17) Observing two lights from an aircraft, not distinguishable by form, if there is a red light on the right and a green light on the left, the aircraft is
 - a) coming directly towards you
 - b) crossing your path from the left
 - c) crossing your path from the right
 - d) moving away from you
- 18) Following a communication failure during flight, a steady green light indication is received from the tower it means:
 - a) give way to other aircraft and continue circling
 - b) cleared to landing
 - c) return to the aerodrome for landing

