



# GOVERNMENT GAZETTE

## OF THE

# REPUBLIC OF NAMIBIA

---

N\$3.26

WINDHOEK - 28 August 1997

No. 1669

---

### CONTENTS

#### GENERAL NOTICE

- No. 249 Proposed Civil Aviation Regulations: Part 133 - Certificated Aircraft  
Operators and other Flight Operations: Helicopter External-Load Operations ... 1
- 

### General Notice

---

#### MINISTRY OF WORKS, TRANSPORT AND COMMUNICATION

No. 249

1997

#### PROPOSED CIVIL AVIATION REGULATIONS :

#### PART 133 - CERTIFICATED AIRCRAFT OPERATORS AND OTHER FLIGHT OPERATIONS : HELICOPTER EXTERNAL-LOAD OPERATIONS

The Ministry of Works, Transport and Communication recently initiated the project to update the current Namibian aviation legislation. There are two main reasons for updating the aviation legislation, namely, the current legislation does not adequately reflect the policies of Namibia for the aviation sector and does not reflect recent developments within SADC. The project further aims to enhance the safety of civil

aviation by ensuring that the Namibian legislation complies with the minimum standards prescribed by the International Civil Aviation Organization.

Part of the short-term legislative reform involves the updating of the regulations made under the Aviation Act, 1962 (Act 74 of 1962).

Due to the nature and extensive range of subjects which need to be regulated, this part of the project will be executed in phases and regulations will be published accordingly. The proposed structure of the Civil Aviation Regulations is set out in Schedule 1.

All the definitions for the proposed civil aviation regulations will be contained and published in Part 1. The definitions for each Part will however be published with each set of proposed regulations, to facilitate the interpretation thereof. The definitions associated with the proposed regulations on helicopter external-load operations are set out in Schedule 2.

The Director : Civil Aviation invites all interested parties to comment on the proposed structure of the Civil Aviation Regulations, the proposed definitions associated with the proposed regulations, as well as the proposed regulations on Helicopter External-Load Operations set out in Schedule 3. The proposed regulations represent Part 133 of the proposed structure.

The proposed regulations on Helicopter External-Load Operations make provision for certain information to be contained in a document called Document NA-CATS-OPS 133. The compilation of the document does not form part of this project, but it is envisaged as a document that will contain all the technical standards regarding helicopter external-load operations.

Comments or representations should be lodged in writing and should reach the Ministry not later than **90 days** from the date of publication of this notice.

Correspondence should be addressed to:

The Director : Civil Aviation

Ministry of Works, Transport and Communication

Department of Transport

Private Bag 12003

WINDHOEK

Attention : Mr Louis Lourens

Telephone : 208-2159

Fax : 238-884

Upon expiry of the aforementioned 90 day period, all comments which have been received will be evaluated for possible incorporation into the proposed regulations on Helicopter External-Load Operations and if necessary, a workshop will be held to finalise the proposed regulations.

**SCHEDULE 1**  
**NAMIBIAN CIVIL AVIATION REGULATIONS STRUCTURE**

<p><b>DEFINITIONS</b></p> <p>Part 1 Definitions</p> <p><b>PROCEDURES</b></p> <p>Part 11 Procedures for making regulations, issuing technical Standards and granting exemptions</p> <p>Part 12 Aviation accidents and incidents</p> <p>Part 13 Enforcement procedures</p> <p><b>AIRCRAFT</b></p> <p>Part 21 Certification procedures for products and parts</p> <p>Part 34 Engine Emissions</p> <p>Part 36 Noise certification</p> <p>Part 43 General maintenance rules</p> <p>Part 47 Aircraft registration and marking</p> <p><b>PERSONNEL</b></p> <p>Part 61 Pilot licensing</p> <p>Part 63 Flight engineer licensing</p> <p>Part 64 Cabin crew licensing</p> <p>Part 65 Air traffic service personnel licensing</p> <p>Part 66 Aircraft maintenance engineer licensing</p> <p>Part 67 Medical requirements</p> <p><b>RULES OF THE AIR AND GENERAL OPERATING RULES</b></p> <p>Part 91 General operating and flight rules</p> <p>Part 92 Conveyance of dangerous goods</p> <p>Part 98 Operation of powered paragliders</p> <p>Part 100 Operation of gyroplanes</p> <p>Part 101 Operation of unmanned balloons, kites, rockets, pilotless and model aircraft</p> <p>Part 102 Operation of free balloons and airships</p> <p>Part 103 Operation of microlight aeroplanes</p> <p>Part 104 Operation of gliders</p> <p>Part 105 Parachuting operations</p> <p>Part 106 Operation of hang gliders</p>	<p><b>CERTIFICATED AIRCRAFT OPERATORS AND OTHER FLIGHT OPERATIONS</b></p> <p>Part 121 Air transport operations - large aeroplanes</p> <p>Part 127 Air transport operations - helicopter</p> <p>Part 133 Helicopters external load operations</p> <p>Part 135 Air transport operations - small aeroplanes</p> <p>Part 137 Agricultural aircraft operations</p> <p>Part 138 Emergency medical services operations</p> <p><b>ORGANISATIONS</b></p> <p>Part 141 Aviation training organisations</p> <p>Part 145 Aircraft maintenance organisations</p> <p>Part 147 Design organisations</p> <p>Part 148 Manufacturing organisations</p> <p>Part 149 Aviation recreation organisations</p> <p><b>AERODROMES AND HELIPORTS</b></p> <p>Part 139 Licensing</p> <p>Part 139 General standards</p> <p><b>AIR TRAFFIC SERVICES</b></p> <p>Part 172 Airspace and air traffic services</p> <p><b>AERONAUTICAL INFORMATION AND RELATED SERVICES</b></p> <p>Part 174 Meteorological information services</p> <p>Part 175 Aeronautical information services</p> <p><b>ADMINISTRATION</b></p> <p>Part 183 General</p> <p>Part 185 Offences</p> <p>Part 187 Fees</p>
---	--

## SCHEDULE 2

### Definitions

In these regulations, unless the context otherwise indicates -

“airworthy” means, when used in relation to an aircraft, that the aircraft is serviceable and meets all the requirements prescribed for the issue of a certificate of airworthiness and such other requirements as have been prescribed for the continuing validity of such a certificate;

“cabin crew member” means a flight crew member, other than a flight deck crew member, licensed in terms of these regulations;

“Class A helicopter-load combination” means a helicopter-load combination in which the external load can not move freely, or be jettisoned, and which does not extend below the landing gear;

“Class B helicopter-load combination” means a helicopter-load combination in which the external load is capable of being jettisoned and which is lifted free of land or water during the helicopter external-load operation;

“Class C helicopter-load combination” means a helicopter-load combination in which the external load is capable of being jettisoned and which remains in contact with land or water during the helicopter external-load operation;

“Class D helicopter-load combination” means a helicopter-load combination, other than a Class A, Class B or Class C helicopter-load combination, which has been approved by the Director for a specific helicopter external-load operation;

“cloud ceiling” means the height above the ground or water of the base of the lowest layer of cloud situated below 20 000 feet and covering more than half the sky;

“commercial air transport operation” means an air service as defined in the Air Services Act, 1949 (Act 51 of 1949);

“day” means the period between the end of morning civil twilight and the beginning of evening civil twilight;

“Document NA-CATS-OPS 133” means a document on the Namibian Civil Aviation Technical Standards relating to helicopter external-load operations which is published by the Director in terms of the Act;

“helicopter-load combination” means the combination of a helicopter and an external-load, including the external-load attaching means;

“heliport” means an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters;

“night” means the period between the end of evening civil twilight and the beginning of morning civil twilight;

“operating certificate” means an operating certificate issued by the Director authorising an operator of a commercial air transport aeroplane to carry out specified air transport operations;

“operations personnel”, for the purposes of Part 133 and Part 138, means personnel assigned to or directly involved in ground and flight emergency medical service operations;

“owner” means an owner as defined in the Act, and for the purposes of Part 91 and Part 133 includes an operator of an aircraft engaged in non-commercial operations;

“take-off distance available” means -

- (a) in the case of an aeroplane, the length of the take-off run available plus the length of the clearway available; or
- (b) in the case of a helicopter, the distance from the point of lift-off to the nearest obstacle in the take-off path, of 50 feet or higher;

“take-off mass” means the mass of the aircraft, including everything and every person carried in the aircraft at the commencement of the take-off run or lift-off, as the case may be;

“visibility” means the ability, as determined by atmospheric conditions and expressed in units of measurement, to see and identify prominent unlighted objects by day and prominent lighted objects by night.

**SCHEDULE 3**  
**LIST OF REGULATIONS**

**SUBPART 1 : GENERAL**

- 133.01.1      Applicability
- 133.01.2      Requirements for commercial external-load operations

**SUBPART 2 : OPERATING RULES AND RELATED REQUIREMENTS**

- 133.02.1      Operating rules
- 133.02.2      Carriage of persons
- 133.02.3      Crew member training, currency and testing requirements

**SUBPART 3 : AIRWORTHINESS REQUIREMENTS**

- 133.03.1      Flight characteristics requirements
- 133.03.2      Structures and design
- 133.03.3      Operating limitations
- 133.03.4      Helicopter-load combination flight manual
- 133.03.5      Markings and placards
- 133.03.6      Equipment



**SUBPART 1****GENERAL****Applicability**

**133.01.1** (1) This Part shall apply to -

- (a) helicopters engaged in commercial and non-commercial external-load operations within Namibia;
- (b) helicopters registered in Namibia and engaged in commercial and non-commercial international external-load operations; and
- (c) persons acting as crew members of the helicopters operated in terms of this Part.

(2) The certification rules of this Part shall not apply to -

- (a) helicopter manufacturers when developing external-load attaching means;
- (b) helicopter manufacturers demonstrating compliance of equipment utilised under this Part or Part 21;
- (c) operations conducted by a person demonstrating compliance for the issuance of any certificate or authorisation under this Part; or

- (d) training flights conducted in preparation for the demonstration of compliance with this Part.

(3) For the purposes of this Part, any person, other than a crew member or a person who is charged with duties essential to the helicopter external-load operation, may only be carried in a Class D helicopter-load combination.

(4) For the purposes of this Part, external-load operations include underslung load operations, winching operations and any operation in which the helicopter is connected by means of a cable to another object, including towing.

(5) Unless the context otherwise indicates, external-load operations shall be conducted in accordance with and in addition to the provisions of Part 91 and Part 127.

#### **Requirements for commercial external-load operations**

**133.01.2** The operator of a helicopter engaged in a commercial external-load operation shall not operate the helicopter unless such operator is the holder of a valid -

- (a) licence issued in terms of the Air Services Act, 1949;  
and
- (b) operating certificate issued in terms of Part 127.

**SUBPART 2**  
**OPERATING RULES AND RELATED REQUIREMENTS**

**Operating rules**

**133.02.1** (1) No owner, operator or pilot-in-command of a helicopter engaged in an external-load operation shall operate the helicopter without, or contrary to, the helicopter-load combination flight manual referred to in regulation 133.03.4.

(2) The owner, operator or pilot-in-command shall not operate the helicopter unless such helicopter -

- (a) has been issued with a standard category type certificate or a restricted category type certificate in terms of Part 21;
- (b) has been issued with a valid certificate of airworthiness in terms of Part 21; and
- (c) complies with the applicable certification provisions of Part 127 that apply to the helicopter load combinations of the operation.

(3) The pilot-in-command of the helicopter shall, before such pilot-in-command operates such helicopter with an external-load configuration that differs substantially from any external load configuration previously carried with such type of helicopter, irrespective of whether the helicopter-load combination is of the same class, conduct, in a manner that will not endanger persons or property on the surface, the following applicable flight-operational checks:

- (a) A determination that -
  - (i) the mass of the helicopter-load combination and the location of its centre of gravity are within approved limits;
  - (ii) the external load is securely fastened; and
  - (iii) the external load does not interfere with devices provided for its emergency release;
- (b) make an initial lift-off and verify that controllability is satisfactory;
- (c) while hovering, verify that directional control is adequate;
- (d) accelerate into forward flight to verify that no attitude of the helicopter or of the external load is encountered, in which the helicopter is uncontrollable or which is otherwise hazardous;
- (e) in forward flight, check for hazardous oscillations of the external load: Provided that if the external load is not visible to such pilot-in-command, other crew members or ground personnel may make this check and signal the pilot-in-command; and
- (f) increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation

or hazardous aerodynamic turbulence is encountered.

(4) Notwithstanding the provisions of Part 91, the owner or operator of a helicopter which has been issued with a restricted category type certificate in terms of Part 21, may conduct an external-load operation over congested areas, if the operation is conducted without hazard to persons or property on the surface and complies with the following:

- (a) The operator shall compile an approved plan for each complete operation, which shall include -
  - (i) an agreement with the appropriate local authority that local officials will exclude unauthorised persons from the area in which the operation will be conducted;
  - (ii) coordination with the appropriate air traffic service unit, if necessary; and
  - (iii) a detailed chart depicting the flight routes and altitudes; and
- (b) each flight shall be conducted at an altitude, and on a route, that will allow -
  - (i) an external load which can be jettisoned, to be released; and
  - (ii) the helicopter to land in an emergency without hazard to persons or property on the surface.

(5) Notwithstanding the provisions of Part 91 and except as prescribed in regulation 133.04.3(4), the owner or operator of a helicopter engaged in an external-load operation may conduct the operation, including an approach, departure, and load positioning manoeuvre necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if such operation is conducted without creating a hazard to persons or property on the surface.

(6) No owner, operator or pilot-in-command of a helicopter engaged in an external-load operation shall conduct the operation under IFR, except with the prior approval of the Director: Provided that no person shall be carried as part of the external load under IFR.

### **Carriage of persons**

**133.02.2** (1) The owner or operator of a helicopter engaged in an external-load operation shall ensure that no person is carried during the operation unless such person -

- (a) is a flight crew member;
- (b) is a flight crew member trainee;
- (c) is charged with duties essential the helicopter external-load operation; or
- (d) is necessary to accomplish the work activity directly associated with that operation.

(2) The pilot-in-command shall ensure that all persons are briefed before take-off on all pertinent procedures to be followed, including normal, abnormal and emergency procedures, and equipment to be used during the external-load operation.

**Crew member training, currency and testing requirements**

**133.02.3** (1) The owner or operator of a helicopter engaged in an external-load operation shall ensure that the pilot-in-command -

- (a) is the holder of a valid underslung load rating (helicopter) or winching rating (helicopter), as the case may be, issued in terms of Part 61; and
- (b) has the knowledge with respect to the helicopter-load combination including the -
  - (i) steps to be taken before starting operations, including a survey of the flight area;
  - (ii) proper method of loading, rigging or attaching the external load;
  - (iii) performance capabilities, under approved operating procedures and limitations, of the helicopter to be used;
  - (iv) proper instructions of flight crew and ground crew; and

- (v) the applicable helicopter-load combination flight manual;
- (c) has the skill with respect to the helicopter-load combination including -
- (i) take-off and landing;
  - (ii) directional control while hovering;
  - (iii) acceleration from a hover;
  - (iv) flight at operational airspeeds;
  - (v) approaches to landing or working area;
  - (vi) manoeuvring the external load into the release position; and
  - (vii) winch operation, if a winch is installed to hoist the external load.

(2) The owner or operator of a Class D helicopter engaged in an external-load operation, shall ensure that each flight crew member or other operations personnel, successfully completes, the appropriate initial or recurrent training, as the case may be.

(3) Upon successful completion of the initial or recurrent training, the operator shall issue a certificate of competency to the flight crew member or



other operations personnel member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

(4) Notwithstanding the provisions of subregulation (2), a flight crew member or other operations personnel who has performed a helicopter external-load operation of the same class and in a helicopter of the same type within the past 12 calendar months need not undergo recurrent training.

**SUBPART 3**  
**AIRWORTHINESS REQUIREMENTS**

**Flight characteristics requirements**

**133.03.1** (1) The owner or operator of a helicopter engaged in an external-load operation shall demonstrate to the Director, by performing the operational flight checks prescribed in subregulation (3), (4) or (5), as the case may be, that the helicopter-load combination to be used in the operations has satisfactory flight characteristics.

(2) For the purposes of the demonstration, the external-load mass, including the external-load attaching means, is the maximum mass for which authorisation is requested.

(3) In the case of a Class A helicopter-load combination the operational flight check shall consist of at least the following manoeuvres:

- (a) Take-off and landing;
- (b) demonstration of adequate directional control while hovering;
- (c) acceleration from a hover; and
- (d) horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested;

(4) In the case of a Class B and a Class D helicopter-load

combination the operational flight check shall consist of at least the following manoeuvres:

- (a) Pickup of the external load;
- (b) demonstration of adequate directional control while hovering;
- (c) acceleration from a hover;
- (d) horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested;
- (e) demonstrating appropriate lifting device operation; and
- (f) manoeuvring of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the helicopter.

(5) In the case of a Class C helicopter-load combination used in wire-stringing, cable-laying, or similar operations, the operational flight check shall consist of the appropriate manoeuvres prescribed in subregulation (4).

### **Structures and design**

**133.03.2** (1) Each external-load attaching means and each quick-release device shall have been approved under Part 21.

(2) The total mass of the helicopter-load combination shall not exceed the total mass approved for the helicopter during its type certification.

(3) The location of the centre of gravity shall, for all loading conditions, be within the range established for the helicopter during its type certification.

(4) For a Class C helicopter-load combination, the magnitude and direction of the loading force shall be established at those values for which the effective location of the centre of gravity remains within its established range.

### **Operating limitations**

**133.03.3** (1) In addition to the operating limitations contained in the aircraft flight manual referred to in regulation 91.03.2, and any other limitations which the Director may prescribe, the owner or operator of a helicopter engaged in an external-load operation shall establish operating limitations and publish the operating limitations in the helicopter-load combination flight manual referred to in regulations 133.03.4, for helicopter-load combination operations.

(2) The operating limitations established by the owner or operator shall include -

- (a) the mass and centre of gravity limitations established in accordance with regulation 133.03.2(2) within which the helicopter-load combination may be operated;
- (b) the external load mass of the helicopter-load combination which shall not exceed the external load mass referred to in regulations 133.03.1 and 133.03.2;

- (c) the airspeeds at which the helicopter-load combination may be operated, which airspeeds shall not be greater than the airspeeds established in accordance with regulations 133.03.1(3), (4) or (5).
- (d) a prohibition on the conducting of an external-load operation in terms of this Part, with a helicopter, type certificated in the restricted category in terms of Part 21, over a densely populated area, in a congested airway, or near an aerodrome licensed in terms of Part 139; and
- (e) in the case of a Class D helicopter-load combination such combination may only be conducted in accordance with the following:
  - (i) The helicopter to be used shall provide hover capability with one engine inoperative at that operating mass and altitude;
  - (ii) the helicopter shall be equipped to allow direct radio intercommunication among required crew members;
  - (iii) the personnel lifting device shall be of an approved type; and
  - (iv) the lifting device shall have an emergency release requiring two distinct actions.

**Helicopter-load combination flight manual**

**133.03.4** (1) The owner or operator of a helicopter to be used in an external-load operation shall compile a helicopter-load combination flight manual and submit the helicopter-load combination flight manual for approval to the Director.

(2) The helicopter-load combination flight manual shall be prepared in accordance with the aircraft flight manual referred to in regulation 91.03.2.

(3) The helicopter-load combination flight manual shall include -

(a) the operating limitations, other than the limiting height-speed envelope data, normal, abnormal and emergency procedures, performance and any other information required in terms of this Subpart;

(b) the class of helicopter-load combinations for which the airworthiness of the helicopter has been demonstrated in accordance with regulation 133.03.1 and 133.03.2; and

(c) in the information section of the helicopter-load combination flight manual -

(i) information on any peculiarities discovered when operating particular helicopter-load combinations;

(ii) precautionary advice regarding static electricity discharges for Class B, Class C and Class D helicopter-load combinations; and

- (iii) any other information essential for safe operation with external loads.

(4) The operator shall include the helicopter-load combination flight manual in the operations manual referred to in regulation 127.04.2.

### **Markings and placards**

**133.03.5** The owner or operator of a helicopter engaged in an external-load operation shall ensure that the markings and placards as prescribed in Document SA-CATS-OPS 133, are displayed in a conspicuous place and cannot be easily erased, disfigured, or obscured.

### **Equipment**

**133.03.6** When the pilot at the flight controls of a helicopter engaged in an external-load operation is not verbally guided by a crew member on board the helicopter, or by a person on the ground using two-way radio communication or the appropriate hand signals, and such pilot is not able to monitor the external load from his or her station, such helicopter shall be fitted with a mirror in such manner that such pilot is able to monitor the external-load from his or her station and conduct the operation without such guidance.