

**STATE OF LIBYA  
MINISTRY OF TRANSPORT  
CIVIL AVIATION AUTHORITY**



**دولة ليبيا  
وزارة المواصلات  
مصلحة الطيران المدني**

# **Libya Civil Aviation Regulations**

## **Part Search and Rescue Services (LYCAR Part-SAR)**

*First Issue - March 2020*

## Foreword

1. The regulations contained herein are adopted under the provision of Article No.(5) of Libyan Civil Aviation Law No.(6) of 2005, and issued and signed up by the Director General of Civil Aviation by virtue of powers vested from the Minister of Transport under the resolution No.(33) issued on 13/02/2019.
2. The Libyan Civil Aviation Regulations - Part Search and Rescue Services (LYCAR.Part-SAR) describes the requirement of Search and Rescue Service provider
3. LYCAR – Part-SAR is the one of series parts related to the requirements and process of authorising different functions applied for by an applicant for ANSP certificate.
4. LYCAA in development of these regulations has adapted ICAO standards and other international principles and best practices.
5. The information contained herein is subject to constant review in the light of changing regulations and requirements. No subscriber or other reader should act on the basis of any such information without also referring to the applicable laws and regulations and/or without taking appropriate professional advice when/as indicated/required. Although, every effort has been made to ensure accuracy, the Libyan Civil Aviation Authority, shall not be held responsible for loss or damage caused by errors, omissions, misprints or misinterpretation of the contents hereof.
6. Copies of this publication can be downloaded from: [www.caa.gov.ly](http://www.caa.gov.ly)

Issued on 23<sup>rd</sup> March 2020, and signed by



23.3.20  
Capt. Nasereddin Shaebelain

Director General



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## Subpart A -General

### SAR.005 - Application

- (1) Civil Aviation Regulations Part SAR is issued by the Libyan Civil Aviation Authority in pursuit of its obligations to ensure enforcement of accepted international regulations and standards within and by organisations providing civil aviation search and rescue services within the State of Libya SRR.
- (2) These Regulation shall apply to all aircraft requiring Aeronautical Search and Rescue services and to persons or organization responsible for the maintenance and operation of Aeronautical Search and Rescue services and establishes general provisions governing the rights and obligations of civil aviation search and rescue service providers and other parties planning for or participating in civil aviation search and rescue operations within the Libyan SRR.
- (3) The SAR service in the state of Libya and its area of jurisdiction is organized in accordance with the Standards and Recommended Practices of ICAO-ANEX 12 by the Libyan Civil Aviation Authority with the collaboration of the Libyan Coast Guard and the Libyan Air Force and other relevant government bodies. The Coast Guard and the Libyan Air Force are the organization responsible for carrying out SAR operation and have the responsibility for making the necessary facilities available.
- (4) The coordination in a SAR operation is conducted through the Libyan Rescue Coordination centre (RCC), which is operated by Libyan Civil Aviation and located at the Tripoli Air Traffic Control Centre.
- (5) No person shall provide search and rescue services except under the authority of, and in accordance with the provisions of this Regulation.

### SAR.010 - Definitions

**Alerting post:** Any facility intended to serve as an intermediary between a person report in an emergency and a rescue coordination centre or rescue sub centre.

**Alert phase:** A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

**Authority:** means the Libyan Civil Aviation Authority (LYCAA).

**Director-General:** means the Director-General of Libyan Civil Aviation Authority.

**Distress phase:** A situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance.

**Ditching:** The forced landing of an aircraft on water.

**Emergency phase:** A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

**Joint rescue coordination centre:** A rescue coordination centre responsible for both aeronautical and maritime search and rescue operations

**Operator:** A person, organization or enterprise engaged in or offering to engage in an aircraft operation

**Pilot-in-command:** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

**Rescue:** An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

**Rescue coordination centre:** A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

**Rescue sub-center:** A unit subordinate to a rescue coordination center, established to complement the latter according to particular provisions of the responsible authorities

**Search:** An operation normally coordinated by a rescue coordination center or rescue Sub-center using available personnel and facilities to locate persons in distress.

**Search and rescue aircraft:** An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

**Search and rescue facility:** Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations

**Search and rescue organization:** The provider of search and rescue services within the Libyan search and rescue region.

**Search and rescue service:** The performance of distress monitoring, communication, coordination and search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.

**Search and rescue region:** An area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

**Search and rescue unit:** A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

**State of Registry:** The State on whose register the aircraft is entered.

**Uncertainty phase:** A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

## **SAR.015 - Abbreviations**

<b>FIR</b>	Flight Information Region
<b>IAMSA</b>	International Aeronautical and Maritime Search
<b>ICAO</b>	International Civil Aviation Organisation
<b>LYCAA</b>	Libyan Civil Authority
<b>LYCAR</b>	Libyan Civil Aviation Regulation
<b>RCC</b>	Rescue Coordination Centre
<b>SAR</b>	Search and Rescue
<b>SRR</b>	Search and Rescue Region

## Subpart B Organization

### SAR.020 - Search and Rescue Services

- (1) The SAR organisation shall, individually or in cooperation with other States, arrange for the establishment and prompt provision of search and rescue services within the state of Libya SRR to ensure that assistance is rendered to persons in distress. Such services shall be provided on a 24-hour basis:-
  - (a) Those portions of the high seas or areas of undetermined sovereignty for which search and rescue services will be established shall be determined on the basis of regional air navigation agreements. The SAR organisation having accepted the responsibility to provide search and rescue services in such areas shall thereafter, individually or in cooperation with other States, arrange for the services to be established and provided in accordance with the provisions of this Regulations.
  - (b) Basic elements of search and rescue services shall include organized available resources, communication facilities and a workforce skilled in coordination and operational functions.
  - (c) Search and rescue services shall establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training.
- (2) In providing assistance to aircraft in distress and to survivors of aircraft accidents, The SAR organisation shall do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.
- (3) The SAR organisation having accepted responsibility to provide search and rescue services shall use search and rescue units and other available facilities to assist any aircraft or its occupants that are or appear to be in a state of emergency.
- (4) Where separate aeronautical and maritime rescue coordination centres serve the same area, The SAR organisation shall ensure the closest practicable coordination between the centres. The SAR organisation should facilitate consistency and cooperation between their aeronautical and maritime search and rescue services. Joint Rescue coordination centres should be established to coordinate aeronautical and maritime search and rescue operations, where practical.

### SAR.025 - Search and Rescue Regions

The Aeronautical SAR region shall coincide with the boundaries of the Libyan Flight Information Region (FIR) within which the SAR organisation will provide search and rescue service.

### SAR.030 - Rescue Coordination Centres and Rescue Sub-Centres

- (1) The SAR organisation shall establish and publish in the AIP, a rescue coordination centre within the search and rescue region.
- (2) The SAR organisation may establish and publish in the AIP search and rescue sub centres, subordinate to the RCC, where this is considered to improve the efficiency of SAR service within the state of Libya.



- (3) Each rescue coordination centre and, as appropriate, rescue sub-center, shall be staffed 24 hours a day by trained personnel proficient in the use of the language used for radiotelephony communications.

### **SAR.035 - Search and Rescue Communications**

- (1) Each rescue coordination center shall have means of rapid and reliable two-way communication with:
- (a) Associated air traffic services units;
  - (b) Associated rescue sub-centres;
  - (c) Appropriate direction-finding and position-fixing stations;
  - (d) Where appropriate, coastal radio stations capable of alerting and communicating with surface vessels in the region;
  - (e) The headquarters of search and rescue units in the region;
  - (f) All maritime rescue coordination centres in the region and aeronautical, maritime or joint rescue coordination centres in adjacent regions;
  - (g) A designated meteorological office or meteorological watch office;
  - (h) Search and Rescue units;
  - (i) Alerting posts; and
  - (j) The COSPAS-SARSAT Mission Control Centre servicing the search and rescue region.
- (2) Each rescue sub-center shall have means of rapid and reliable two-way communication with:
- (a) Adjacent rescue sub-centres;
  - (b) A meteorological office or meteorological watch office;
  - (c) Search and rescue units; and
  - (d) Alerting posts.

### **SAR.040 - Search and Rescue Units**

- (1) The SAR organisation shall designate as search and rescue units elements of public or private services suitably located and equipped for search and rescue operations.
- (2) As parts of the search and rescue plan of operation, the SAR organisation shall designate elements of public or private services that do not qualify as search and rescue units but are nevertheless able to participate in search and rescue operations.

### **SAR. 045 - Search and Rescue Equipment**

- (1) Search and rescue units shall be provided with equipment for locating promptly, and for providing adequate assistance at, the scene of an accident.
- (2) Each search and rescue unit shall have means of rapid and reliable two-way communication with other search and rescue facilities engaged in the same operation.
- (3) Each search and rescue aircraft shall be equipped to be able to communicate on the aeronautical distress and on scene frequencies and on such other frequencies as may be prescribed.

- (4) Each search and rescue aircraft shall be equipped with a device for homing on distress frequencies.
- (5) Each search and rescue aircraft, when used for search and rescue over maritime areas, shall be equipped to be able to communicate with vessels
- (6) Each search and rescue aircraft, when used for search and rescue over maritime areas shall carry a copy of the International Code of Signals to enable it to overcome language difficulties that may be experienced in communicating with ships.

**SAR.050 – Search and rescue manual**

- (1) The SAR organisation shall develop and maintain a search and rescue operations manual. The operation manual shall serve to demonstrate how the SAR organisation will comply with the requirements set out in this Regulations.
- (2) The contents of the operations manual shall include but not limited to the following:
  - (a) The information required of the SAR organisation as mentioned in this Regulations; and
  - (b) A description of the SAR organisation that shows the role, responsibilities and job functions of the SAR personnel who are responsible for ensuring the compliance of the organisation with the requirements in sub-paragraph (a).
- (3) The SAR organisation shall ensure that SAR personnel have ready access to the operations and amend the manual whenever necessary to keep its content up to date.
- (4) The SAR organisation shall submit a copy of the most current operations manual to the Authority.

## Subpart C - Cooperation

### SAR.055 - Cooperation between States

- (1) The SAR organisations shall coordinate its search and Rescue efforts with those of neighbouring States. They should, when necessary, coordinate their search and rescue operation with those of neighbouring States especially when these operations are proximate to adjacent search and rescue regions.
- (2) The SAR organisations shall, develop common search and rescue plans and procedures to facilitate coordination of search and rescue operations with those of neighbouring States.
- (3) The Authority in coordination with the SAR organisation shall permit immediate entry into its territory of SAR units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.
- (4) SAR units entering the territory of neighbouring States for search and rescue purposes shall transmit a request, giving full details of the projected mission and the need for it, to the rescue coordination centre of the neighbouring State concerned or to such other authority as has been designated by that State.
- (5) Other States parties, who wish their Aeronautical Search and Rescue units to enter the territory of LIBYA for Search and Rescue purposes shall transmit a request, giving full details of the projected mission and the need for it, to the Authority. Then the Authority shall:
  - (a) Acknowledge the receipt of such a request, and
  - (b) As soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken.
- (6) Instructions as to the control which will be exercised on entry of such aircraft and/or personnel shall be given by the RCC in accordance with the standing plan for the conduct of search and rescue in the area.
- (7) The Authority, through the rescue coordination centre shall:
  - (a) Request from other rescue coordination centres such assistance, including aircraft, vessels, persons or equipment, as may be needed;
  - (b) Grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory; and
  - (c) Make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.
- (8) The SAR organisation shall make arrangements for joint training exercises involving its search and rescue units, those of other States and operators, in order to promote search and rescue efficiency.
- (9) The SAR organisation should make arrangements for periodic liaison visits by personnel of its RCC to the centres of neighbouring states.

### SAR.060 - Cooperation with other services

- (1) All aircraft, vessels and local services and facilities which do not form part of the search and rescue

organization shall cooperate fully with the latter in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.

- (2) Close practicable coordination between the relevant aeronautical and maritime authorities should be maintained to provide for the most effective and efficient search and rescue services.
- (3) The SAR organisation shall ensure that their search and rescue services cooperate with those responsible for investigating accidents and with those responsible for the care of those who suffered from the accident. To facilitate accident investigation, rescue units should, when practicable, be accompanied by persons qualified in the conduct of aircraft accident and incident investigations.
- (4) The SAR organisation shall designate a search and rescue point of contact for the receipt of COSPA-SARAAT distress data.

### **SAR.065 - Dissemination of Information**

- (1) The SAR organisation shall publish and disseminate all information necessary for the entry of search and rescue units of other States into its territory or, alternatively include this information in SAR arrangements.
- (2) When such information could benefit the provision of search and rescue services, the SAR organisation should make available, through the RCC or other agencies, information regarding their SAR plans of operation.
- (3) The SAR organisation should, to the extent desirable and practicable, disseminate information to the general public and emergency response authorities regarding actions to be taken when there is reason to believe that an aircraft's emergency situation may become cause for public concern or require a general emergency response.

## Subpart D -Preparatory Measures

### SAR.070- Preparatory information

- (1) Each rescue coordination centre shall have readily available at all times up-to-date information concerning the following in respect of its search and rescue region:
  - (a) Search and rescue units, rescue sub-centres and alerting posts;
  - (b) Air Traffic Services Units;
  - (c) Means of communication that may be used in search and rescue operations;
  - (d) Addresses and telephone numbers of all operators, or their designated representatives, engaged in operations in the region; and
  - (e) Any other public and private resources including medical and transportation facilities that are likely to be useful in search and rescue.
- (2) Each rescue coordination centre shall have readily available all other information of interest to search and rescue, including information regarding:
  - (a) The locations, call signs, hours of watch, and frequencies of all radio stations likely to be employed in support of search and rescue operations;
  - (b) The locations and hours of watch of services keeping radio watch, and the frequencies guarded;
  - (c) Locations where supplies of droppable emergency and survival equipment are stored; and
  - (d) Objects which it is known might be mistaken for unallocated or unreported wreckage, particularly if viewed from the air.
- (3) The RCC whose search and rescue region includes maritime areas shall, have ready access to information regarding the position, course and speed of ships within such areas that may able to provide assistance to aircraft in distress and information on how to contact them.
- (4) The SAR organisation should, individually or in cooperation with other States, either establish ship reporting systems in cooperation with maritime authorities or arrange communication links with Amver or regional ship reporting systems to facilitate search and rescue operations at sea.

*Note. - Amver is a cooperative international ship reporting system with worldwide coverage that is available for interrogation by all rescue coordination centres. A number of States also operate regional ship reporting systems.*

### SAR.075 - Plans of operation

- (1) Each rescue coordination centre shall prepare detailed plans of operation for the conduct of search and rescue operations within its search and rescue region.
- (2) Search and rescue plans of operations shall be developed jointly with representatives of the operators and other public or private services that may assist in providing search and rescue services or benefit from them, taking into account that the number of survivors could be large.

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- (3) The plans of operation shall specify arrangements for the servicing and refuelling, to the extent possible, of aircraft, vessels and vehicles employed in search and rescue operations, including those made available by other States.
  - (4) The search and rescue plans of operation shall contain details regarding actions to be taken by those persons engaged in search and rescue, including:
    - (a) The manner in which search and rescue operations are to be conducted in the search and rescue region;
    - (b) The use of available communication systems and facilities;
    - (c) The actions to be taken jointly with other rescue coordination centres;
    - (d) The methods of alerting en-route aircraft and ships at sea;
    - (e) The duties and prerogatives of persons assigned to search and rescue;
    - (f) The possible redeployment of equipment that may be necessitated by meteorological or other conditions;
    - (g) The methods for obtaining essential information relevant to search and rescue operations, such as weather reports and forecasts, appropriate NOTAM, etc.;
    - (h) The methods for obtaining, from other rescue coordination centres, such assistance, including aircraft, vessels, persons or equipment, as may be needed;
    - (i) The methods for assisting distressed aircraft being compelled to ditch to rendezvous with surface craft;
    - (j) The methods for assisting search and rescue or other aircraft to proceed to aircraft in distress; and
    - (k) Cooperative actions to be taken in conjunction with air traffic services units and other authorities concerned to assist aircraft known or believed to be subject to unlawful interference.
  - (5) Search and rescue plans of operation shall be integrated with airport emergency plans to provide for rescue services in the vicinity of aerodromes including, for coastal aerodromes, areas of water.

### **SAR.080 - Search and Rescue Units**

- (1) Each search and rescue unit shall:
  - (a) be cognizant of all parts of the plans of operation prescribed in SAR 070 that are necessary for the effective conduct of its duties; and
  - (b) keep the rescue coordination centre informed of its preparedness.
- (2) SAR organisation shall:-
  - (a) Maintain in readiness the required number of search and rescue facilities; and
  - (b) Maintain adequate supplies of rations, medical stores, signalling devices and other survival and rescue equipment.

**SAR.085 - Training and exercises**

- (1) To achieve and maintain maximum efficiency in search and rescue, SAR organisation shall provide for regular training of their search and rescue personnel and arrange appropriate search and rescue exercises.
- (2) Training in aeronautical SAE shall consist of theoretical and practical knowledge of aeronautical SAR operations. The following subject areas should be included to demonstrate a level of knowledge appropriate to conduct aeronautical SAR operations in the RCC:
  - (a) General SAR procedures:
    - (i) ICAO Annex 12 and International provisions
    - (ii) SAR organisation
    - (iii) SAR resources
    - (iv) SAR communications
    - (v) SAR operating procedures
    - (vi) RCC and rescue subcentres
    - (vii) Meteorological information for SAR
    - (viii) Conduct of search and air search patterns
    - (ix) Rescue of survivors
  - (b) Aeronautical SAR procedures
    - (i) Aeronautical SAR organisation
    - (x) Aeronautical RCC administration
    - (xi) Basic navigation
    - (xii) Search areas (sea and land)
    - (xiii) Search techniques (sea and land)
    - (xiv) Plotting exercises
  - (c) SAR exercises

A paper SAR exercises to coordinate, direct and control aeronautical SAR operations under simulated SAR situations.
- (3) The SAR organisation shall ensure that SAR personnel maintain a basic level of competency in recurrent / refresher taring that includes knowledge about updates in ICAO provisions and other provisions pertaining to SAR.
- (4) The SAR organisation shall maintain training records for their SAR personnel.

### **SAR.090 - Wreckage**

The SAR organisation shall ensure that wreckage resulting from aircraft accidents within its SRR or, in the case of accidents on the high seas or in areas of undetermined sovereignty, within the search and rescue regions for which it is responsible, is removed, obliterated or charted following completion of the accident investigation, if its presence might constitute a hazard or confuse subsequent search and rescue operations.



## Subpart E Operating Procedures

### SAR.095 - Information Concerning Emergencies

- (1) Any authority or any element of the search and rescue organization having reason to believe that an aircraft is in an emergency shall give immediately all available information to the rescue coordination center concerned.
- (2) Rescue coordination centers shall, immediately upon receipt of information concerning aircraft in emergency, evaluate such information and assess the extent of the operation required.
- (3) When information concerning aircraft in emergency is received from other sources than air traffic services units, the rescue coordination center shall determine to which emergency phase the situation corresponds and shall apply the procedures applicable to that phase.

### SAR.100 - Procedures for rescue coordination centres during emergency phases

#### (1) Uncertainty phase

Upon the occurrence of an uncertainty phase, the rescue coordination center shall cooperate to the utmost with air traffic services units and other appropriate agencies and services in order that incoming reports may be speedily evaluated.

#### (2) Alert phase

Upon the occurrence of an alert phase the rescue coordination center shall immediately alert search and rescue units and initiate any necessary action.

#### (3) Distress phase

Upon the occurrence of a distress phase, the rescue coordination center shall:

- (a) Immediately initiate action by search and rescue units in accordance with the appropriate plan of operation;
- (b) Ascertain the position of the aircraft, estimate the degree of uncertainty of this position, and, on the basis of this information and the circumstances, determine the extent of the area to be searched;
- (c) Notify the operator, where possible, and keep the operator informed of developments;
- (d) Notify other rescue coordination centers, the help of which seems likely to be required, or which may be concerned in the operation;
- (e) Notify the associated air traffic services unit, when the information on the emergency has been received from another source;
- (f) Request at an early stage such aircraft, vessels, coastal stations and other services not specifically included in the appropriate plan of operation and able to assist to:
  - (i) Maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an ELT;

*Note.- The frequencies contained in the specifications for ELT given in Annex 10 Volume III are 121.5 MHz and 406 MHz.*

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- (ii) Assist the aircraft in distress as far as practicable, and inform the rescue coordination centre of any developments.
  - (g) From the information available, draw up a detailed plan of action for the conduct of the search and/or rescue operation required and communicate such plan for the guidance of the authorities immediately directing the conduct of such an operation;
  - (h) Amend as necessary, in the light of evolving circumstances, the detailed plan of action;
  - (i) Notify the appropriate accident investigation authorities; and
  - (j) Notify the State of Registry of the aircraft.
- (4) The order in which these action are described shall be followed unless circumstances dictate otherwise
- (5) Initiation of search and rescue action in respect of an aircraft whose position is unknown In the event that an emergency phase is declared in respect of an aircraft whose position is unknown and may be in one of two or more search and rescue regions, the following shall apply:
- (a) When a rescue coordination centre is notified of the existence of an emergency phase and is unaware of other centres taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with Regulation SAR.095 and confer with neighbouring rescue coordination centres with the objective of designating one rescue coordination centre to assume responsibility forthwith.
  - (b) Unless otherwise decided by common agreement of the rescue coordination centres concerned, the rescue coordination centre to coordinate search and rescue action shall be the centre responsible for:
    - (i) The region in which the aircraft last reported its position; or
    - (ii) The region to which the aircraft was proceeding when its last reported position was on the line separating two search and rescue regions; or
    - (iii) The region to which the aircraft was destined when it was not equipped with suitable two-way radio communication or not under obligation to maintain radio communication; or
    - (iv) The region in which the distress site is located as identified by the Cospas-Sarsat system.
  - (c) After declaration of the distress phase, the rescue coordination center with overall coordination responsibility shall inform all rescue coordination centers that may become involved in the operation of all the circumstances of the emergency and subsequent developments. Likewise, all rescue coordination centres becoming aware of any information pertaining to the emergency shall inform the rescue coordination centre that has overall responsibility.
- (6) Passing of information to aircraft in respect of which an emergency phase has been declared Whenever applicable, the rescue coordination center responsible for search and rescue action shall forward to the air traffic services unit serving the flight information region in which the

aircraft is operating, information of the search and rescue action initiated, in order that such information can be passed to the aircraft.

### **SAR.105 - Procedures where responsibility for operations extends to two or more States**

Where the conduct of operations over the entire search and rescue region is the responsibility of more than one State, each involved State shall take action in accordance with the relevant plan of operations when so requested by the RCC of the region.

### **SAR.110 - Procedures for Authorities in the field**

The authorities immediately directing the conduct of operations or any part thereof shall:

- (1) Give instructions to the units under their direction and inform the RCC of such instructions; and
- (2) Keep the RCC informed of developments.

### **SAR.115 - Procedures for rescue coordination centres - termination and suspension of operations**

- (1) Search and rescue operations shall continue, when practicable, until all survivors are delivered to a place of safety or until all reasonable hope of rescuing survivors has passed.
- (2) The responsible RCC shall normally be responsible for determining when to discontinue search and rescue operations.
- (3) When a search and rescue operation has been successful or when a RCC considers, or is informed, that an emergency no longer exists, the emergency phase shall be cancelled, the SAR operation shall be terminated and any authority, facility or service that has been activated or notified shall be promptly informed.
- (4) If a search and rescue operation becomes impracticable and the RCC concludes that there might still be survivors, the centre shall temporarily suspend on-scene activities pending further developments and shall promptly inform any authority, facility or service which has been activated or notified. Relevant information subsequently received shall be evaluated and SAR operations resumed when justified and practicable.

### **SAR.120 - Procedures at the scene of an accident**

- (1) When multiple facilities are engaged in SAR operations on-scene, the RCC shall designate one or more unit on-scene to coordinate all actions to help ensure the safety and effectiveness of air and surface operations, taking into account facility capabilities and operational requirements.
- (2) When a pilot-in-command observes that either another aircraft or a surface craft is in distress, the pilot shall, if possible and unless considered unreasonable or unnecessary:
  - (a) Keep the craft in distress in sight until compelled to leave the scene or advised by the RCC that it is no longer necessary;
  - (b) Determine the position of the craft in distress;

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- (c) As appropriate, report to the RCC or air traffic services unit as much of the following information as possible:
- (i) Type of craft in distress, its identification and condition;
  - (ii) Its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
  - (iii) Time of observation expressed in hours and minutes Coordinated Universal Time (UTC);
  - (iv) Number of persons observed;
  - (v) Whether persons have been seen to abandon the craft in distress;
  - (vi) On-scene weather conditions;
  - (vii) Apparent physical condition of survivors;
  - (viii) Apparent best ground access route to the distress site; and
- (d) Act as instructed by the rescue coordination centre or the air traffic services unit.
- (3) If the first aircraft to reach the scene of an accident is not a search and rescue aircraft, it shall take charge of on-scene activities of all other aircraft subsequently arriving until the first search and rescue aircraft reaches the scene of the accident. If, in the meantime, such aircraft is unable to establish communication with the appropriate RCC or air traffic services unit, it shall, by mutual agreement, hand over to an aircraft capable of establishing and maintaining such communications until the arrival of the first SAR aircraft.
- (4) When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication it's not available, it shall, if practicable, drop communication equipment that would enable direct contact to be established, or convey the information by dropping a hard copy message.
- (5) When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in paragraph 3. or , if this is not practicable, by making the appropriate visual signal.
- (6) When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. If no radio communication can be established, the aircraft shall make the appropriate visual signal.

### **SAR.125 - Procedures for a pilot-in-command intercepting a distress transmission**

Whenever a distress transmission is intercepted by a pilot-in-command of an aircraft, the pilot shall, if feasible:

- (1) Acknowledge the distress transmission;
- (2) Record the position of the craft in distress if given;

- (3) Take a bearing on the transmission;
- (4) Inform the appropriate RCC or air traffic services unit of the distress transmission, giving all available information; and
- (5) At the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

**SAR.130 - Search and Rescue Signals**

- (1) The air-to-surface and surface-to-air visual signals in Appendix1 shall when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.
- (2) Upon observing any of the signals in Appendix 1, aircraft shall take such action as may be required by the interpretation of the signal given in Appendix 1.

**SAR.135 - Maintenance of Records**

- (1) Each RCC shall keep a record of the operational efficiency of the SAR organization in its region.
- (2) Each RCC shall prepare appraisals of actual SAR operations in its region. These appraisals shall comprise any pertinent remarks on the procedures used and on the emergency and survival equipment, and any suggestions for improvement of those procedures and equipment. Those appraisals which are likely to be of interest to other States should be submitted to ICAO for information and dissemination as appropriate.

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## APPENDIX1. SEARCH AND RESCUE SIGNALS

### 1. Signals with surface craft

1.1 The following manoeuvres performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress:

- a) circling the surface craft at least once;
- b) crossing the projected course of the surface craft close ahead at low altitude and:
  - (i) rocking the wings; or
  - (ii) opening and closing the throttle; or
  - (iii) changing the propeller pitch.

*Note.- Due to high noise level on board surface craft, the sound signals in 2) and 3) may be less effective than the visual signal in 1) and are regarded as alternative means of attracting attention.*

- c) heading in the direction in which the surface craft is to be directed.

Repetition of such manoeuvres has the same meaning.

1.2 The following manoeuvres by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required:

- *crossing the wake of the surface craft close astern at a low altitude and:*
  - (i) *rocking the wings; or*
  - (ii) *opening and closing the throttle; or*
  - (iii) *changing the propeller pitch.*

*Note.- The following replies may be made by surface craft to the signal in 1.1:*

- *for acknowledging receipt of signals:*
  - (i) *the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);*
  - (ii) *the flashing of a succession of “T’s” by signal lamp in the Morse code;*
  - (iii) *the changing of heading to follow the aircraft.*
- *for indicating inability to comply:*
  - (i) *the hoisting of the international flag “N” (a blue and white checkered square);*
  - (ii) *the flashing of a succession of “N’s” in the Morse code.*

*Note. - See Note following 1.1 b), 3).*

## 2. Ground-air visual signal code

### 2.1 Ground-air visual signal code for use by survivors

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

### 2.2 Ground-air visual signal code for use by rescue units

No.	Message	Code symbol
1	Operation completed	LLL
2	We have found all personnel	<u>LL</u>
3	We have found only some personnel	++
4	We are not able to continue. Returning to base	XX
5	Have divided into two groups. Each proceeding in direction indicated	↔
6	Information received that aircraft is in this direction	→ →
7	Nothing found. Will continue to search	NN

2.3 Symbols shall be at least 2.5 metres (8 feet) long and shall be made as conspicuous as possible.

*Note 1. - Symbols may be formed by any means such as: strips of fabric, parachute material, pieces of wood, stones or such like material; marking the surface by tramping, or staining with oil.*

*Note 2. - Attention to the above signals may be attracted by other means such as radio, flares, smoke and reflected light.*

## 3. Air-to-ground signals

3.1 The following signals by aircraft mean that the ground signals have been understood:

- a) during the hours of daylight:
  - By rocking the aircraft's wings;
- b) during the hours of darkness:

- Flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

3.2 Lack of the above signal indicates that the ground signal is not understood

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