



**Civil Aviation Authority**

# **CAR-176**

## **Civil Aviation Regulation**

# **Search and Rescue**

**Effective 15 June 2023**

**Approved by: H.E. Eng. Naif Ali Hamed Al-Abri**  
**President of CAA**

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## Foreword

- (1) (a) The Civil Aviation Requirements for Civil Aviation Regulation Enforcement Procedures have been issued by the Civil Aviation Authority of Oman – DGCA (hereinafter referred to as “the AUTHORITY”) under the provisions of the Civil Aviation Law of the Sultanate of Oman.
- (2) This CAR has been modelled upon similar regulations implemented by other member States and includes the subject matter endorsed within ICAO Annex 12, *Search and Rescue*.
- (3) CAR 176 prescribes the requirements for all organizations and entities that are delegated by the Authority to provide search and rescue services for domestic and international civil aviation aircraft operating in the Muscat Flight Information Region (FIR). For purposes of this regulation, the delegated search and rescue organizations and entities are hereinafter referred to as “the Delegate”.
- (4) This Regulation is supplemented by the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume I — *Organization and Management*, Volume II — *Mission Coordination*, and Volume III — *Mobile Facilities* (Doc 9731), the purpose of which is to assist the Authority in meeting its search and rescue (SAR) needs and obligations accepted under the Convention on International Civil Aviation. These obligations, as they relate to the provision of SAR services, are specified in this Regulation. The three volumes of the IAMSAR Manual provide guidance for a common aviation and maritime approach to organizing and providing SAR services.
- (5) Amendments to the text in CAR 176 in revised editions are issued as a complete amendment of pages contained within.
- (6) The editing practices used in this document are as follows:
  - (a) ‘Shall’ and ‘Must’ are used to indicate a mandatory requirement and may appear in this CAR.
  - (b) ‘Should’ is used to indicate a recommendation.
  - (c) ‘May’ is used to indicate discretion by the AUTHORITY, or the industry as appropriate.
  - (d) ‘Will’ indicates a mandatory requirement and is used to advise of action incumbent on the AUTHORITY.

**Note: The use of the male gender implies the female gender and vice versa.**

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## SUBPART A – GENERAL

### CAR 176.001 Applicability

CAR 176, Search and Rescue, is applicable to the establishment, maintenance and operation of search and rescue (SAR) services and shall apply to all organizations and entities delegated by the Authority to provide search and rescue (SAR) services within the Muscat Flight Information Region (Muscat FIR) and over the high seas, and to the coordination of such services with other States.

### CAR 176.003 Entry into force

This CAR shall enter into force from the day of its publication and shall be applicable on 15 June 2023.

### CAR 174.005 Establishment of Authority

- (a) Directorate General of Civil Aviation Regulation (DGCAR) established under the Civil Aviation Authority (CAA), referred to in this regulation as the Authority, shall determine, in accordance with the provisions of the Civil Aviation Law of the Sultanate of Oman and this regulation is applicable to the establishment, maintenance and operation of search and rescue services in the territories and over the high seas, and to the coordination of such services between States.
- (b) The Authority shall arrange for such services to be established, except that, by mutual agreement, the Authority may delegate to another State the responsibility for establishment, maintenance and operation of search and rescue services in territories and over the high seas.
- (c) Those portions of the airspace over the high seas or in airspace of undetermined sovereignty where search and rescue services will be provided shall be determined on the basis of regional air navigation agreements. Where the Authority has accepted the responsibility to provide search and rescue services in such portions of airspace it shall arrange for the services to be established and provided in accordance with the provisions of this CAR.
- (d) When it has been determined that search and rescue services will be provided, the Authority shall designate the service provider(s) responsible for providing such services.
- (e) Where search and rescue services are established, information shall be published by the Authority and/or the designated service provider to permit the utilization of such services.

### CAR 176.007 Definitions

The following definitions shall form part of this regulation, supplemented by the definitions contained in other ICAO documentation. Where there are differences between the CAR and ICAO definitions, the CAR definitions shall apply.

**Alerting post.** Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination center or rescue subcenter.

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

**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 center (JRCC).** A rescue coordination center 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 center (RCC).** 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 subcenter (RSC).** 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 subcenter 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 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 (SRR).** An area of defined dimensions, associated with a rescue coordination center, 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.

## CAR 176.009 Safety and Regulatory Audits and Inspections

- (1) The Authority shall conduct audits at intervals not exceeding two (2) years at the Delegate's office and/or unit or facility.
- (2) The Authority may require the Delegate to provide such documentation and information as the Authority considers relevant to the audit or inspection.
- (3) Subject to the Delegate's security and safety requirements, the Authority shall be granted by the Delegate, unrestricted access to the Delegate's facilities and shall be permitted to carry its own equipment (e.g. computers, cameras and recording devices) under all conditions while carrying out its oversight functions.

## CAR 176.011 Resolution of Safety Issues

- (1) When objective evidence is found showing regulatory non-compliance by the Delegate, the finding shall be classified as follows:
  - (a) a level one finding is any significant non-compliance which reduces the level of safety.
  - (b) a level two finding is any non-compliance that does not result in an immediate risk to safety.
  - (c) a level three finding is any item where it has been identified, by objective evidence, to contain potential problems that could lead to a non-compliance. These are considered as observations only and will not impact a certificate.
- (2) After the Delegate receives notification of a finding:
  - (a) a level one finding must be rectified immediately or within the timescale specified by the

Authority.

- (b) a level two finding shall be addressed in a corrective action plan with a resolution period specified by the Authority and shall be appropriate to the nature of the finding, but in any circumstance shall not be more than ninety (90) days. In certain circumstances, the Authority may extend the ninety (90) day period subject to justification that is acceptable to the Authority.
- (c) the Delegate's corrective action plan shall:
  - i. be submitted by the date specified by the Authority;
  - ii. identify the root cause of the non-compliance;
  - iii. indicate the person, position, department or entity responsible for the corrective action;
  - iv. indicate the corrective action required including any multiple steps; and
  - v. be acceptable to the Authority.
- (3) Upon the completion and/or implementation of a corrective action, the Delegate shall notify the Authority and provide evidence of its resolution.

### CAR 176.013 Enforcement Actions

- (1) When a CAA Inspector is apprised of, or observes a contravention, they will complete a Detection Notice form and forward it without delay to the appropriate Supervisor for decision as specified in CAR 12.
- (2) The Authority may pursue one or more enforcement actions upon recognizing or identifying a contravention. This following is a list of enforcement actions in degree of severity which the Authority may pursue in the event of a contravention:
  - (a) **Verbal warning.** The Director of Legal Department or a designated inspector acting on his behalf may verbally caution an individual or a designated person within an entity regarding a contravention. Such verbal warnings must accurately state the contravention, provide a legal basis for the contravention, and inform the cautioned party regarding which further enforcement actions are available to the Authority in the event of further non-compliance.
  - (b) **Formal written warning.** The Director of Legal Department or a designated inspector acting on his behalf may issue a written notice to an individual or a designated person within an entity stating that the Authority believes that a contravention has occurred. Such written warnings must accurately state the contravention, provide a legal basis for the contravention, and inform the cautioned party regarding which further enforcement actions are available to the Authority in the event of further non-compliance.
  - (c) **Monetary fine.** Any fine shall be levied via the serving of an Aviation Infringement Notice (AIN) up to the maximum amount stated in the enforcement provision in each regulation in accordance with CAR-12.115. Non-payment of fines may be pursued through the appropriate court, with the cost of court action to be borne by the party receiving the AIN.

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## SUBPART B – ORGANIZATION

### CAR 176.101 Search and Rescue Services

- (1) The Delegate shall, individually or in cooperation with other States, arrange for the establishment and prompt provision of search and rescue services within the Authority's territories to ensure that assistance is rendered to persons in distress. Such services shall be provided on a twenty-four (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 Delegate, 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 Regulation.
  - (b) Basic elements of search and rescue services shall include a legal framework, a responsible authority, organized available resources, communication facilities, a sufficient workforce skilled in coordination and operational functions and job descriptions for its technical staff.
  - (c) Search and rescue services shall establish processes to improve service provision, including the aspects of planning, domestic and international cooperative arrangements and training including an implemented training program.
- (2) In providing assistance to aircraft in distress and to survivors of aircraft accidents, the Delegate shall do so regardless of the nationality or status of such persons or the circumstances in which such persons are found.
- (3) The Delegate 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 centers serve the same area, the Delegate shall ensure the closest practicable coordination between the centers.
- (5) The Delegate should facilitate consistency and cooperation between their aeronautical and maritime search and rescue service.

### CAR 176.103 Search and Rescue Regions

The Delegate shall delineate the search and rescue regions within which they will provide search and rescue services. Such regions shall not overlap and neighboring regions shall be contiguous.

### CAR 176.105 Rescue Coordination Centers and Rescue Subcenters

- (1) The Delegate shall establish a rescue coordination center in each search and rescue region.
- (2) Each rescue coordination center and, as appropriate, rescue subcenter, shall be staffed 24 hours a day by trained personnel proficient in the use of the English language used for radiotelephony communications.
- (3) RCC personnel involved in the conduct of radiotelephony communications should be proficient in the use of the English language at a level determined by the SAR Service Provider and acceptable to the Authority
- (4) In areas where public telecommunications facilities would not permit persons observing an aircraft in emergency to notify the rescue coordination centre concerned directly and promptly, States should designate suitable units of public or private services as alerting posts.

### CAR 176.107 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 subcenters;

- (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 centers in the region and aeronautical, maritime or joint rescue coordination centers in adjacent regions;
  - (g) a designated meteorological office or meteorological watch office;
  - (h) search and rescue units;
  - (i) All designated alerting posts; and
  - (j) Associated police forces;
  - (k) the COSPAS-SARSAT Mission Control Centre servicing the search and rescue region.
- (2) Each rescue subcenter shall have means of rapid and reliable two-way communication with:
- (a) The RCC
  - (b) adjacent rescue subcenters;
  - (c) Associated air traffic services
  - (d) Associated police forces
  - (e) a meteorological office or meteorological watch office;
  - (f) search and rescue units; and
  - (g) alerting posts.

#### **CAR 176.109 Search and Rescue Units**

- (1) The Delegate shall designate as search and rescue units, elements of public or private services suitably located and equipped for search and rescue operations.
- (2) The Delegate shall designate as parts of the search and rescue plan of operation, 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.

#### **CAR 176.111 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 should 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.
- (7) Unless it is known that there is no need to provide supplies to survivors by air, at least one of the aircrafts participating in a search and rescue operation should carry droppable survival equipment.
- (8) Search and rescue units should locate, at appropriate aerodromes, survival equipment suitably packed for dropping by aircraft

**CAR 176.113 Search and Rescue document library**

- (1) Search and rescue units shall establish and maintain a document library, readily accessible at all times by its operational and management staff, containing up to date editions of relevant documentation.
- (2) The library shall at all times have available for reference current editions of:
  - (a) Annex 12;
  - (b) (IAMSAR) Manual, Volume I – Organization and Management, Volume II – Mission Co- ordination, and Volume III – Mobile Facilities (Doc 9731);
  - (c) Cir 185 – Satellite-aided Search and Rescue – The COSPAS-SARSAT System (1986)
  - (d) Handbook on Distress Alert Messages for Rescue Coordination Centers (RCCs);
  - (e) Search and Rescue Points of Contact (SPOCs);
  - (f) IMO Ship Security Competent Authorities (Cospas-Sarsat Document Reference G.007);
  - (g) International Code of Signals (IMO Sales Numbers IA994E); and
  - (h) Other technical documentation relevant to the effective delivery of SAR services in Oman
- (3) Search and rescue units shall produce, maintain and update master copies of all manuals required for the safe, effective and timely provision of civil aviation SAR services in Oman and provide copies, on request, to the Authority.

**CAR 176.115 Record keeping**

Search and rescue units shall retain all data relating to every SAR action undertaken by the RCC in an orderly and easily accessed manner for a period of at last twelve calendar months.

**CAR 176.117 Service Disruptions**

The Delegate shall establish procedures, in addition to any reporting requirements:

- (1) Advise the Authority of any planned disruption to the provision of SAR services that could have an impact on safety including measures taken to mitigate the impact of the disruption;
- (2) Request the approval of the authority for Issuing a NOTAM to cover the planned period of disruption;
- (3) Investigate any unplanned disruption to the SAR services;
- (4) Report to the Authority, within 48 hours of the occurrence, the circumstances surrounding any unplanned disruption to SAR services when the disruption affected, or could have affected the safety.

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**SUBPART C – COOPERATION****CAR 176.201 Cooperation Between States**

- (1) The Delegate shall coordinate their search and rescue organizations with those of neighboring States.
- (2) Subject to such conditions as may be prescribed by its own authorities, a Delegate shall permit immediate entry into its territory of search and rescue units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents.
- (3) The authorities of an ICAO Contracting State who wish their search and rescue units to enter the territory of the Delegate 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 center of the Delegate concerned or to such other authority as has been designated by the Delegate.
  - (a) The authorities of the Delegate shall:
    - immediately acknowledge the receipt of such a request;
    - as soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken; and
    - provide, when requested, assistance to other RCCs in the form of aircraft, vessels, persons or equipment.

**CAR 176.203 Cooperation with Other Services**

- (1) The Delegate shall arrange for all aircraft, vessels and local services and facilities which do not form part of the search and rescue organization to cooperate fully with the latter in search and rescue and to extend any possible assistance to the survivors of aircraft accidents.
- (2) The Delegate 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.
- (3) The Delegate shall designate a search and rescue point of contact for the receipt of COSPAS-SARSAT distress data.

**CAR 176.205 Dissemination of Information**

The Delegate 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 search and rescue service arrangements.

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## SUBPART D - PREPARATORY MEASURES

### CAR 176.301 Preparatory Information

- (1) Each rescue coordination center 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 subcenters 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.

### CAR 176.303 Plans of Operation

- (1) Each rescue coordination center shall prepare detailed plans of operation for the conduct of search and rescue operations within its search and rescue region.
- (2) The plans of operation shall specify arrangements for the servicing and refueling, to the extent possible, of aircraft, vessels and vehicles employed in search and rescue operations, including those made available by other States.
- (3) 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 centers;
  - (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 centers, 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.
- (4) The plans of operation should be accepted by the appropriate authority.

**CAR 176.305 Search and Rescue Units**

- (1) Each search and rescue unit shall:
  - (a) be cognizant of all parts of the plans of operation prescribed in CAR 176.303 that are necessary for the effective conduct of its duties; and
  - (b) keep the rescue coordination center informed of its preparedness.
- (2) The Delegate shall:
  - (a) maintain in readiness the required number of search and rescue facilities; and
  - (b) maintain adequate supplies of rations, medical stores, signaling devices and other survival and rescue equipment.

**CAR 176.307 Training and Exercises**

- (a) To achieve and maintain maximum efficiency in search and rescue, the Delegate shall provide for regular training of their search and rescue personnel and arrange appropriate search and rescue exercises.
- (b) The training plan of the search and rescue exercises should be accepted by the appropriate authority.

**CAR 176.309 Wreckage**

The Delegate should ensure that wreckage resulting from aircraft accidents within its territory 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.

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**SUBPART E – OPERATING PROCEDURES****CAR 176.401 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.

**CAR 176.403 Procedures for Rescue Coordination Centers 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:
  - maintain a listening watch for transmissions from the aircraft in distress, survival radio equipment or an ELT;
  - assist the aircraft in distress as far as practicable; and
  - inform the rescue coordination center 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; and
- (i) notify the appropriate accident investigation authorities.
- (j) notify the State of Registry of the aircraft.

The order in which these actions above are described shall be followed unless circumstances dictate otherwise.

**(4) 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:

- (k) When a rescue coordination center is notified of the existence of an emergency phase and is unaware of other centers taking appropriate action, it shall assume responsibility for initiating suitable action in accordance with CAR 176.403 and confer with neighboring rescue coordination centers with the objective of designating one rescue coordination center to assume responsibility forthwith.
- (l) Unless otherwise decided by common agreement of the rescue coordination centers concerned, the rescue coordination center to coordinate search and rescue action shall be the center responsible for:
- the region in which the aircraft last reported its position; or
  - the region to which the aircraft was proceeding when its last reported position was on the line separating two search and rescue regions; or
  - 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
  - the region in which the distress site is located as identified by the COSPAS- SARSAT system.
- (m) 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 centers becoming aware of any information pertaining to the emergency shall inform the rescue coordination center that has overall responsibility.
- (2) ***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.

### **CAR 176.405 Procedures Where Responsibility for Operations Extends to Two or More Contracting States**

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

### **CAR 176.407 Procedures for Authorities in the Field**

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

- (a) give instructions to the units under their direction and inform the rescue coordination center of such instructions; and
- (b) keep the rescue coordination center informed of developments.

### **CAR 176.409 Procedures for Rescue Coordination Centers – 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 rescue coordination center (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 rescue coordination center considers, or is informed, that an emergency no longer exists, the emergency phase shall be

cancelled, the search and rescue 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 rescue coordination center concludes that there might still be survivors, the center 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 search and rescue operations resumed when justified and practicable.

#### **CAR 176.411 Procedures at the Scene of an Accident**

- (1) When multiple facilities are engaged in search and rescue operations on-scene, the rescue coordination center or rescue subcenter shall designate one or more units 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 rescue coordination center that it is no longer necessary;
  - (b) determine the position of the craft in distress;
  - (c) as appropriate, report to the rescue coordination center or air traffic services unit as much of the following information as possible:
    - type of craft in distress, its identification and condition;
    - its position, expressed in geographical or grid coordinates or in distance and true bearing from a distinctive landmark or from a radio navigation aid;
    - time of observation expressed in hours and minutes Coordinated Universal Time (UTC);
    - number of persons observed;
    - whether persons have been seen to abandon the craft in distress;
    - on-scene weather conditions;
    - apparent physical condition of survivors;
    - apparent best ground access route to the distress site; and
  - (d) act as instructed by the rescue coordination center or the air traffic services unit.
  - (e) 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 rescue coordination center 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 search and rescue aircraft.
- (3) When it is necessary for an aircraft to convey information to survivors or surface rescue units, and two-way communication is 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.
- (4) When a ground signal has been displayed, the aircraft shall indicate whether the signal has been understood or not by the means described in (c) or, if this is not practicable, by making the appropriate visual signal.
- (5) 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.



**CAR 176.413 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:

- (a) acknowledge the distress transmission;
- (b) record the position of the craft in distress if given;
- (c) take a bearing on the transmission;
- (d) inform the appropriate rescue coordination center or air traffic services unit of the distress transmission, giving all available information; and
- (e) at the pilot's discretion, while awaiting instructions, proceed to the position given in the transmission.

**CAR 176.415 Search and Rescue Signals**

- (1) The air-to-surface and surface-to-air visual signals in the Appendix. Search and Rescue Signals 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 the Appendix, aircraft shall take such action as may be required by the interpretation of the signal given in that Appendix search and rescue signals.

**CAR 176.417 Maintenance of Records**

- (1) Each rescue coordination center shall keep a record of the operational efficiency of the search and rescue organization in its region including the training records for their technical staff.
- (2) Each rescue coordination center shall prepare appraisals of actual search and rescue operations in its region. These appraisals should 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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**APPENDIX. SEARCH AND RESCUE SIGNALS**

(Note. — See CAR 176.415 Search and Rescue Signals of this regulation)

**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:
  - 1) rocking the wings; or
  - 2) opening and closing the throttle; or
  - 3) changing the propeller pitch.
  - 4) 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:

- 1) rocking the wings; or
- 2) opening and closing the throttle; or
- 3) 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:

- 1) the hoisting of the “code pennant” (vertical red and white stripes) close up (meaning understood);
- 2) the flashing of a succession of “T’s” by signal lamp in the Morse code;
- 3) the changing of heading to follow the aircraft.

— for indicating inability to comply:

- 1) the hoisting of the international flag “N” (a blue and white checkered square);
- 2) the flashing of a succession of “N’s” in the Morse code.


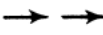
Note. — See Note following 1.1 b), 3).

**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.