SECTION EIGHT - SAR, OVERDUE ACTION, EMERGENCIES, AIRMISS REPORTING

Q. What are the SAR regions of the UK and what is the general dividing line between regions?

A. NORMAR and SOUMAR with dividing line at 5230N.
(JSP 318A/8/6202)

Q. Where are the RCCs located?

A. Pitreavie Castle, Dunfermline and Mountbatten, Plymouth.
(JSP 318A/8/6202)

Q. What are the internationally recognised phases of emergency and the associated code words used on signal messages?

A. (1) UNCERTAINTY - INCERFA
(2) ALERT - ALERFA
(3) DISTRESS - DETRESFA
(ATP 10(c) - Supp 1)

Q. Define the phases of emergency.

A. (1) UNCERTAINTY is a situation where doubt exists as to the safety of an aircraft.

(2) ALERT is a situation where apprehension exists for the safety of an aircraft.

(3) DISTRESS is a situation where there is reasonable certainty that an aircraft is threatened by grave and imminent danger or requires immediate assistance.
(ATP 10(c) - Supp 1)

Q. Where are the RAF mountain rescue teams based?

A.

Kinloss	Leuchars	Linton-on-Ouse
St Athan	Stafford	Valley

(GAI 1014)

Q. Who is responsible for SAR in the UK?

A. A joint service and civil organisation.
(JSP 318A/8/6201)

Q. What are the RT callsigns used by SAR participants?

A. (1) Conventional search aircraft - RESCUE.
(2) Search helicopter - RESUE HELICOPTER.
(3) Survivor in dinghy - GOODYEAR.
(4) RAF high speed launch - RESCUE BOAT.
(5) RN search vessel - BIRDDOG.
(ATP 10(c) - Supp 1)

Q. When is a jet, turbo-prop or piston-engined fixed wing aircraft considered to be overdue?

A. When it fails to arrive at, or is not in radio communication with its destination airfield at the earliest of the following:

(1) ETA radar entry or other specified terminal calling point.
(2) ETA overhead.
(3) ETA landing.

(JSP 318A/8/6101)

Q. When is a helicopter considered to be overdue?

A. When it fails to arrive at, or is not in radio communication with its destination airfield as follows:

(1) For flights over water - at the end of notified endurance.
(2) For flights over land - one hour after the end of notified endurance.

(JSP 318A/8/6101)

Q. What action should be taken by the ATCO IC at an airfield when an aircraft becomes overdue?

A. Directly an aircraft is considered to be overdue the ATCO IC is to pass all relevant details to:

(1) D and D section of the parent ATCC.
(2) The appropriate unit personnel.

(JSP 318A/8/6102)

Q. What action is taken by the D and D controller at the ATCC in the event of an aircraft becoming overdue?

A. The D and D controller makes every effort to trace the missing aircraft within his own FIR by:

(1) Checking with alternative airfields (if known).
(2) Requesting information from all airfields on the route of the overdue aircraft.
(3) Checking aircraft details against all current crash reports within the FIR.
(4) Requesting airfield information from ATCCs of adjoining FIRs in cases where airfields on the aircraft's route are within their boundaries.
(5) Originating, if necessary, a 'Request News' message to all flying units within the FIR.
(6) If the preceding action fails, informing the DATCO at AIS(M) giving full details of the aircraft and its flight, of action taken and results obtained.
(7) Initiating SAR activity by informing the appropriate RCC and passing all relevant details of the aircraft and its flight.

(JSP 318A/8/6102)

Q. Who is responsible for requesting the assistance of the civil police or if necessary informing the duty press officer at MOD if an overdue aircraft has not been located?

A. DATCO at AIS(M).

(JSP 318A/8/6102)

Q. What is a GRADE ONE diversion?

A. A GRADE ONE diversion is mandatory and may only be originated by the aircraft operating authority. It may be passed to the captain either through ATC or on the channels of communication of the operating authority.

(JSP 318A/8/6001)

Q. What action does the captain of an aircraft take if he considers that he cannot comply with a GRADE ONE diversion?

A. The captain is to either inform the appropriate authority of his reasons and indicate his intentions or he is to request other instructions.

(JSP 318A/8/6001)

Q. Who may originate an aircraft diversion?

A. (1) The aircraft operating authority.
(2) Air traffic control.
(3) The aircraft captain.

(JSP 318A/8/6001)

Q. What is a GRADE TWO diversion?

A. A GRADE TWO diversion is advisory and may be originated by an ATC officer, the officer is to obtain the approval of the aircraft operating authority when possible.

(JSP 318A/8/6001)

Q. What action does the captain of an aircraft take when on receipt of a grade TWO diversion, he decides to continue to the original destination?

A. The captain of the aircraft is to inform the aircraft operating authority through ATC of his intentions. He may proceed to his original destination only if in the event of his attempt to land at the airfield being unsuccessful, he will subsequently be able to reach the diversion airfield with enough fuel to ensure a safe landing in the event of a missed approach.

(JSP 318A/8/6001)

Q. What factors must be taken into account by the diverting officer when deciding whether a diversion airfield is suitable?

A. (1) Range and endurance of aircraft.
(2) Experience and qualifications of crew.
(3) Weather.
(4) Radio and radar aids serviceable in the aircraft and at the diversion airfield.
(5) Aircraft requirements eg landing distance required and servicing facilities required.
(6) Admin facilities at the diversion airfield.

(JSP 318A/8/6002)

Q. What action is taken by the ATCO IC at an airfield when an aircraft diversion becomes necessary?

A. (1) Informs D and D Controller at parent ATCC.

(2) Obtains all necessary instructions for the captain of the aircraft which are to include any necessary clearances for CAS.
(3) Passes the appropriate type of diversion message to the captain of the aircraft.
(4) Informs the aircraft operating authority of action taken.

(JSP 318A/8/6003)

Q. Who constitutes an aircraft operating authority for RAF aircraft?

A. (1) Command and Group HQ.
(2) CO or other specialist officer appointed by the appropriate commander.
(3) When the aircraft is operating outside the justification of its own authority, the CO or appointed deputy at the destination airfield.

(JSP 318A/DEFN/XIV)

Q. How are the two states of emergency defined?

A. (1) DISTRESS - the aircraft is threatened by serious and imminent danger and is in need of immediate assistance.

(2) URGENCY - the calling station has a very urgent message to transmit concerning the safety of an aircraft or of persons on board or within sight.

(JSP 318A/8/5905)

Q. What information is included in the preliminary part of an emergency message?

A. (1) For DISTRESS calls: 'MAYDAY' said 3 times and AIRCRAFT CALLSIGN said 3 times.

(2) For URGENCY calls: 'PAN' said 3 times and AIRCRAFT CALLSIGN said once.

(JSP 318A/8/5905)

Q. What information should be included, time permitting, in the emergency message?

A. (1) Estimated position and time.
(2) True heading and indicated airspeed.
(3) Flight level, height or altitude.
(4) Type of aircraft.
(5) Nature of emergency and assistance required.
(6) Intentions of captain.
(7) Remaining endurance.

(JSP 318A/8/5905)

Q. What is the safety message?

A. The safety message, which does not indicate an emergency within an aircraft, indicates that the station is about to transmit a message concerning the safety of navigation or giving important met warnings eg loose balloon or severe icing conditions. The call is preceded by the word SECURITE said three times.

(JSP 318A/8/5907)

Q. What is the lower limit for accurate fixes using auto triangulation in the UK?

A. (1) In the LONDON FIR - 5000ft
(2) In the SCOTTISH FIR - 8500ft

(JSP 318A/8/5801)

Q. What important features should an aerodrome crash map show?

A. (1) North orientation.
(2) Runway magnetic headings.
(3) Taxiways and dispersals.
(4) Roads and tracks fit for safety service vehicles.
(5) Main road junctions and crossings.
(6) Hazards such as ditches and narrow or difficult areas.
(7) Areas which are not negotiable by safety service vehicles, either at all times or at certain times of the year due to weather or tidal conditions.
(8) All points of exit from the airfield such as hedge gaps, bridges over ditches, gateways etc.
(9) Areas of known poor R/T cover.
(10) Numbered crash exits.

(JSP 318A/8/5802)

Q. Which has the higher priority, a 'Training Fix' or a 'Practice Emergency?'

A. The Training Fix.

(JSP 318A/8/5805)

Q. What action is taken by the ATCO at an airfield on hearing an emergency transmission on 243.0 MHz which is not being answered?

A. The ATCO is to notify the D and D controller at the parent ATCC giving full details of the call and any true bearings received. The ATCO at the airfield is not to answer the call on 243.0MHz without the permission of the D and D controller.

(JSP 318A/8/5904)

Q. What action is to be taken by a controller receiving an emergency call on an airfield discrete frequency?

A. (1) The controller receiving the call is to answer the message and render whatever assistance is possible.
(2) The controller is also to notify the D and D controller as soon as possible that an emergency message has been received and answered and liaise closely with the centre until the incident is concluded.

(JSP 318A/8/5904)

Q. What are the procedures recommended to attract attention whilst flying outside CAS if an aircraft is lost or uncertain of position and without two way radio communication?

A. (1) Switch SSR to emergency code 3A 7600.
(2) Continue to attempt to make contact and listen out on the appropriate emergency frequency.
(3) If the receiver only is operating, select appropriate emergency frequency and flies a triangular pattern to the RIGHT (120° turns) holding each heading for two minutes if speed is less than 300 Kts or for one minute if speed is higher than 300Kts. The aircraft should fly at best endurance speed and turns should be made before resuming the original heading and then the pattern should be repeated at intervals.
(4) If both receiver and transmitter are inoperative a triangular pattern is again flown but turns to the **LEFT** are made.
(5) It is recommended that the aircraft should be in VMC to enable 'sheperd' aircraft to intercept; at night and/or when in IMC the aircraft should turn on the navigation and anti-collision lights.

(FIH)

Q. What sort of map is used for a local area crash map on airfields?

A. An OS map with a scale of 1:50,000 and a range of at least 5 NMs from the airfield.

(JSP 318A/8/5802)

Q. For how long are the position fixes by auto-triangulation equipment retained at the ATCC?

A. For twelve months.

(JSP 318A/8/5902)

Q. What action should be taken when a crash takes place off an airfield and the location is known?

A. When the location is known, the ATCO IC should take action in accordance with command regulations but based on the following:

(1) Operate the crash alarm bell/telephone.
(2) Make an appropriate broadcast over the station broadcast system.
(3) If the probable area is known, request local aircraft to search for the crash aircraft. Whenever possible the search aircraft should be dispatched on orders from OCFW/OC Ops but controllers are to use their own initiative to have local search activity started as soon as possible.
(4) Instruct the standby vehicles and request SAR helicopter/ crash boat to come to readiness.
(5) Pass crash message containing whatever information known or suspected.
(6) Inform D and D at parent ATCC without delay if any form of local search activity has been started. Complete details are to be passed to the centre in order that additional SAR activity initiated by them may be properly integrated.

(JSP 318A/8/5802)

Q. What action should be taken by a unit observing a drifting balloon?

A. A report is to be immediately passed to AIS(M) at LATCC(Mil) including the time and position and the estimated height, track and speed of the balloon.

(JSP 318A/8/5909)

Q. Where are details of the UK UHF Emergency Fixer Service to be found?

A. FIH.

(FIH)

Q. Define the two types of emergency control.

A. (1) EXECUTIVE CONTROL reflects the responsibility vested in the D and D controller for the supervision of the ATC handling of an emergency incident. This responsibility may only be transferred to an emergency controller at another ATCC.

(2) OPERATIONAL CONTROL reflects the responsibility delegated by the D and D controller to one or more ATC agencies in respect of the procedural and control instructions to be passed to the pilot in emergency.

(JSP 318A/8/5901)

Q. What procedure is used to assist a pilot in the event of an unserviceable microphone?

A. The Speechless Procedure is adopted and the following code utilised:

(1) 4 clicks indicate 'H' for homing.
(2) 1 click indicates affirmative.
(3) 2 clicks indicate negative.
(4) 3 clicks indicate say again.
(5) The letter 'X' in morse indicates an additional or greater degree of emergency.

(FIH) (JSP 318A/8/6302)

Q. On airfields where crash gates are locked for security reasons, who holds the keys to the gates?

A. Crash crews are to be in possession of crash exit keys suitably tagged for quick identification and duplicate keys should be readily available in ATC.

(JSP 318A/8/5802)

Q. What constitutes an airmiss?

A. Whenever a pilot considers that his aircraft may have been endangered by the proximity of another aircraft during flight to the extent that a definite risk of collision existed.

(JSP 318A/9/6806)

Q. Having made an initial report of an airmiss by radio what action is the captain of an aircraft to take on landing in UK?

A. (1) Telephones conformation to AIS(M) at LATCC(Mil).
(2) Compiles report on Airmiss Reporting Form (F765A).

(JSP 318A/9/6806)

Q. What action does the controller take on the receipt of an initial report of an airmiss?

A. (1) Attempts to identify the reported aircraft.
(2) Passes details of the airmiss to AIS(M) LATCC(Mil)
(3) Forwards detailed report for inclusion with F765A

(JSP 318A/9/6806)

Q. Which authorities are required to raise narrative reports on F765A?

A. (1) Unit of the reporting pilot.
(2) Unit of the reported pilot.
(3) Agency providing ATS/Air Defence Service where applicable.
(4) Any other unit requested to do so.

(JSP 318A/9/6806)

Q. What information is contained in the initial report of an airmiss?

A. (1) Callsign.
(2) Time of airmiss.
(3) Position of airmiss.
(4) Height, altitude or flight level and aircraft attitude.
(5) Heading.
(6) Weather conditions.
(7) Details of airmiss and, if possible, a description of the other aircraft including type, markings, nationality, callsign and any other information.

(JSP 318A/8/6806)

Q. What action is taken by a reported pilot when informed of his involvement in an airmiss?

A. A pilot base in the UK and reported as having been involved in an airmiss is to:

(1) Telephone report to AIS(M) as soon as possible.
(2) Compile report on Airmiss Reporting Form 765A.

(JSP 318A/9/6806)

Q. Within what period of time is the airmiss report to be distributed?

A. Within 14 working days of the incident.

(JSP 318A/9/6806)

Q. Which SSR codes have been allocated for use by aircraft in emergency?

A. (1) Code 7500 is used to indicate that the progress of the flight is subject to unlawful interference ie hijacking.

(2) Code 7600 is used by a pilot who loses 2-way communication with a ground agency.

(3) Code 7700 is used by a pilot experiencing an emergency whilst receiving an air traffic service.

(JSP 318A/7/5603)

Q. What generally is the lower limit for emergency services on VDF in the UK?

A. In general the service is limited below 3000ft AMSL and in particular over parts of Scotland, Wales and SW England, where the location of lost aircraft by use of VDF may be inhibited by the limited number of suitably equipped units.

(JSP 318A/8/5805)

Q. What action should be taken by the controller at an airfield on receiving a call from a pilot on 121.5?

A. (1) The controller is to note the details of the pilot's message and alert the D and D controller if it is apparent that the message is not being answered.

(2) If the emergency call is directed at the airfield the controller is to render whatever assistance he can to the pilot.

(3) When the incident is being controlled by the Centre, if the airfield is equipped with 121.5 VDF equipment, the controller is to select that channel and notify D and D of any bearings received in degrees (T).

(4) At the request of the D and D section the airfield controller is to assume Operationsl Control of the aircraft, keeping D and D informed of the progress of the incident.

(JSP 318A/8/5904)

Q. What is the range of a 'PLB' and on what frequency does it operate?

A. (1) The 'Personal Locator Beacon' can be received at distances of up to 200NMs by aircraft at 40,000ft and over 60NMs by aircraft at 10,000ft.

(2) PLB operates on 243.0 MHz.

(ATP 10(c)-SUPP 1)

Q. What facilities for SAR are provided by the RAF?

A. (1) RCCs

(2) Long range maritime search aircraft.

(3) Other aircraft capable of search duties.

(4) Helicopters for rescue.

(5) Marine craft.

(6) Mountain rescue teams.

(AP 3418/1305)

Q. When taking a report on an emergency incident, what information should be obtained by the controller from the outside agency?

A. (1) Name, location and telephone number of person making the report.

(2) Nature of incident being reported.

(3) Position and time of incident.

(4) Type of aircraft involved (if known).

(5) Other action taken.

(AP 3418/1312)

Q. What facilities for SAR are available from civilian sources?

A. (1) Civil aircraft.

(2) Coastal radio stations.

(3) Merchant shipping.

(4) Coast guards.

(5) RNLI

(6) Ocean weather ships.

(7) Police, Fire and Ambulance services.

(8) Radio and TV.

(9) Civilian MRT.

(AP 3418/1305)