Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 139/2014, Issue 1, Amendment 9

Annex to ED Decision 202X/XXX/R

'AMC and GM to Operations Requirements for Aerodromes — Issue1, Amendment 9'

This AMC and GM to Commission Regulation (EU) No 139/2014 document (Annex to ED Decision 202X/XXX/R) shows deleted text, new or amended text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

The Annex to ED Decision 2014/012/R of the Executive Director of the Agency of 27 February 2014 is amended as follows:

AMC1 ADR.OPS.B.031(b)(4) Communications

RADIO COMMUNCIATION FAILURE

~~(a) The signals to be used in case of radio communication failure between air traffic services and vehicles or pedestrians authorised to operate on the manoeuvring area should have the following meaning:~~

~~LIGHTS SIGNAL FROM AIR TRAFFIC SERVICES~~	~~MEANING~~
~~Green flashes~~	~~Permission to cross landing area or to move onto taxiway~~
~~Steady red~~	~~Stop~~
~~Red flashes~~	~~Move off the landing area or taxiway and watch out for aircraft~~
~~White flashes~~	~~Vacate manoeuvring area in accordance with local instructions~~

~~(b) In emergency conditions or if the signals in point (a) are not observed, the signal given below will be used for runways or taxiways equipped with a lighting system and should have the following meaning:~~

~~LIGHT SIGNAL~~	~~MEANING~~
~~Flashing runway or taxiway lights~~	~~Vacate the runway and observe the tower for light signal~~

(~~c~~a) Care should be taken to ensure that the procedures address the case where, due to the prevailing visibility conditions, the light signals may not be seen by the driver or the pedestrian authorised to operate on the manoeuvring area.

(~~d~~b) In case of agreement with the air traffic services provider to use other/additional communication means in the event of radio communication feature (e.g. mobile phones), the procedures should also cover the necessary practical details (e.g. telephone numbers to be used), as well as the order of the use of the agreed solutions.

Acceptable Means of Compliance and Guidance Material to Annex VI (Part-AIS) to Commission Implementing Regulation (EU) 2017/373, Issue 1, Amendment 3

Annex to ED Decision 202X/XXX/R

'AMC and GM to Part-AIS — Issue1, Amendment 3'

This AMC and GM to Annex VI (Part-AIS) to Commission Implementing Regulation (EU) 2017/373 document (Annex to ED Decision 202X/XXX/R) shows deleted text, new or amended text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

The Annex to ED Decision 2017/001/R of the Executive Director of the Agency of 8 March 2017 is amended as follows:

Note to the reader

In amended, and in particular in existing (that is, unchanged) text, 'Agency' *is used interchangeably with* 'EASA'. *The interchangeable use of these two terms is more apparent in the consolidated versions. Therefore, please note that both terms refer to the* 'European Union Aviation Safety Agency (EASA)'.

GM8 AIS.TR.305(c) Aeronautical information publication (AIP)

PUBLICATION OF RADIO MANDATORY ZONES AND TRANSPONDER MANDATORY ZONES

(a) The requirement to include a detailed description of radio mandatory zones (RMZs) and transponder mandatory zones (TMZs) in the Aeronautical Information Publication (AIP) should be met in a clear and unambiguous manner, including in any relevant charts.

(b) Information about RMZ/TMZ is meant to be published under the following AIP sections:

(1) Section GEN 1.5 contains the general requirements regarding the aircraft equipment;

(2) Section ENR 2 contains the information on RMZ and TMZ in the air traffic services airspace and other regulated airspace;

(3) Section ENR 6 contains an en-route chart illustrating the RMZ and TMZ;

(4) Section AD 2 contains the aerodrome-specific requirements including the visual approach and area charts with the information on RMZ and TMZ.

AMC1 AIS.OR.325 Aeronautical charts

PRODUCTION

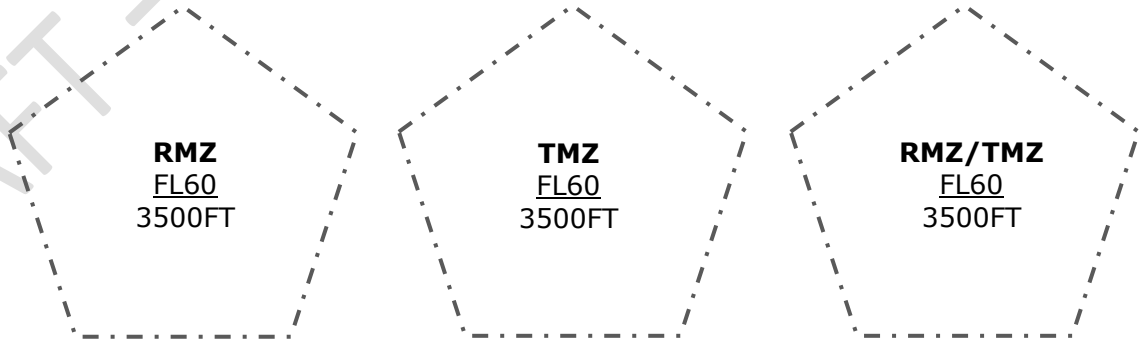
Aeronautical charts should be produced in accordance with the specifications contained in ICAO Annex 4, Amendment No 61, except that any radio mandatory zones and transponder mandatory zones should be depicted on the 'Visual approach chart – ICAO' and the 'Area chart – ICAO', as follows:

(a) the radio mandatory zones and the transponder mandatory zones should be displayed with an RMZ and TMZ tag respectively, and in case both zones are defined for a specific area with the RMZ/TMZ tag. A thick dark grey dashed-dotted line should be used in all cases.

GM1 AIS.OR.325 Aeronautical charts

PRODUCTION

The radio mandatory zones and transponder mandatory zones on the 'Visual approach chart – ICAO' and the 'Area chart – ICAO' may be depicted as in the following example:



Acceptable Means of Compliance and Guidance Material to Annex IV (Part-ATS) to Commission Implementing Regulation (EU) 2017/373, Issue 1, Amendment 5

Annex to ED Decision 202X/XXX/R

'AMC and GM to Part-ATS — Issue1, Amendment 5'

This AMC and GM to Annex IV (Part-ATS) to Commission Implementing Regulation (EU) 2017/373 document (Annex to ED Decision 202X/XXX/R) shows deleted text, new or amended text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

The Annex to ED Decision 2017/001/R of the Executive Director of the Agency of 8 March 2017 is amended as follows:

Note to the reader

In amended, and in particular in existing (that is, unchanged) text, 'Agency' *is used interchangeably with* 'EASA'. *The interchangeable use of these two terms is more apparent in the consolidated versions. Therefore, please note that both terms refer to the* 'European Union Aviation Safety Agency (EASA)'.

GM1 ATS.TR.270(a)(3) Authorisation of special VFR

SPECIAL VFR IN CONTROL ZONES

When the reported ground visibility at the aerodrome is less than 1 500 m, air traffic control units may issue a special VFR clearance for a flight crossing the control zone and not intending to ~~take off or~~ land at an aerodrome within ~~a~~the control zone, or enter the ~~aerodrome traffic zone or~~ aerodrome traffic circuit when the flight visibility reported by the pilot is not less than 1 500 m, or, for helicopters, not less than 800 m.

~~GM1 ATS.OR.445(a) Communications for the control or management of vehicles other than aircraft on manoeuvring areas at aerodromes~~

~~**SYSTEM OF VISUAL SIGNALS FOR COMMUNICATION BETWEEN AERODROME AIR TRAFFIC SERVICES UNITS AND VEHICLES ON THE MANOEUVRING AREA**~~

~~(a) When communications by a system of visual signals is deemed to be adequate, or in the case of radio communication failure, the signals given hereunder should have the meaning indicated in the table below.~~

~~LIGHTS SIGNAL FROM AIR TRAFFIC SERVICES~~	~~MEANING~~
~~Green flashes~~	~~Permission to cross landing area or to move onto taxiway~~
~~Steady red~~	~~Stop~~
~~Red flashes~~	~~Move off the landing area or taxiway and watch out for aircraft~~
~~White flashes~~	~~Vacate manoeuvring area in accordance with local instructions~~

~~(b) In emergency conditions or if the signals in point (a) are not observed, the signal given hereunder should be used for runways or taxiways equipped with a lighting system and should have the meaning indicated in the table below.~~

~~LIGHT SIGNAL~~	~~MEANING~~
~~Flashing runway or taxiway lights~~	~~Vacate the runway and observe the tower for light signal~~

AMC1 ATS.TR.220 Application of wake turbulence separation

CATEGORISATION OF AIRCRAFT FOR THE PURPOSES OF WAKE TURBULENCE SEPARATION MINIMA

Wake turbulence separation minima should be based on a grouping of aircraft types into four categories according to the maximum certificated take-off mass as follows:

(a) SUPER (S~~J~~) aircraft types listed as such in ICAO Doc 8643 'Aircraft Type Designator', latest edition ~~if so identified by the competent authority~~;

(b) HEAVY (H) — all aircraft types of 136 000 kg or more, with the exception of aircraft types as in point (a);

(c) MEDIUM (M) — aircraft types less than 136 000 kg but more than 7 000 kg; and

(d) LIGHT (L) — aircraft types of 7 000 kg or less.

Acceptable Means of Compliance and Guidance Material to the Annex to Regulation (EU) No 923/2012, Issue 1, Amendment 7

Annex I to ED Decision 2023/XXX/R

'AMC and GM to Regulation (EU) No 923/2012 — Issue 1, Amendment 7'

This AMC and GM to Regulation (EU) No 923/2012 document (Annex to ED Decision 202X/XXX/R) shows deleted text, new or amended text as follows:

— deleted text is ~~struck through~~;

— new or amended text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

The Annex to ED Decision 2013/013/R of the Executive Director of the Agency of 17 July 2013 is amended as follows:

Note to the reader

In amended, and in particular in existing (that is, unchanged) text, 'Agency' *is used interchangeably with* 'EASA'. *The interchangeable use of these two terms is more apparent in the consolidated versions. Therefore, please note that both terms refer to the* 'European Union Aviation Safety Agency (EASA)'.

AMC/GM to the Cover Regulation

GM1 Article 2(27) Air traffic advisory service

AIR TRAFFIC ADVISORY SERVICE

[…]

~~(b) Aircraft wishing to conduct IFR flights within advisory airspace, but not electing to use the air traffic advisory service, are nevertheless to submit a flight plan, and notify changes made thereto to the unit providing that service.~~

(~~c~~b) ~~ATS~~ Air traffic services units providing air traffic advisory service:

[…]

GM1 Article 2(89a) Instrument approach operations

[…]

GM1 Article 9 Safety requirements

SAFETY ASSESSMENT

The safety assessment on the implementation plan should be conducted by the Member State after the introduction of any amendment to this Regulation to identify any hazard, assess the risks and mitigate them before implementing the changes to the previously applied procedures.

AMC/GM to the Cover Regulation

GM3 SERA.3105 Minimum heights

TERMS OF TAKE-OFF AND LANDING

In the context of SERA.3105, the terms 'take-off' and 'landing' include operations such as touch-and-go, go-around or missed approach performed to an aerodrome or operating site for which the necessary obstacle clearance assessment was conducted and approved by the relevant competent authorities.

GM2 SERA.4005(a)(14) Contents of a flight plan

BALLISTIC PARACHUTE RECOVERY SYSTEM

The information on ballistic parachute recovery systems can be included in the field for Remarks under item 19 of the ICAO model flight plan, as specified in Appendix 2 to ICAO Doc 4444, Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) Edition 16 up to and including Amendment 9.

GM1 SERA.5010(c) Special VFR in control zones

ISSUANCE OF SPECIAL VFR CLEARANCE

When the reported ground visibility at the aerodrome is less than 1 500 m, ATC may issue a special VFR clearance for a flight crossing the control zone and not intending to ~~take-off or~~ land at an aerodrome within ~~a~~the control zone, or enter the ~~aerodrome traffic zone or~~ aerodrome traffic circuit

when the flight visibility reported by the pilot is not less than 1 500 m, or, for helicopters, not less than 800 m.

AMC1 SERA.6001(a)(6) Classification of airspaces

OPERATIONS IN CLASS F AIRSPACE

(a) Aircraft using the air traffic advisory service

IFR flights electing to use or required by the competent authority on the basis of regional air navigation agreements to use the air traffic advisory service when operating within Class F airspace should comply with the same procedures as those applying to controlled flights except that:

(1) the flight plan and changes thereto are not subjected to a clearance, since the unit furnishing air traffic advisory service will only provide advice on the presence of essential traffic or suggestions as to a possible course of action;

(2) it is for the aircraft to decide whether or not it will comply with the advice or suggestion received and to inform the unit providing air traffic advisory service, without delay, of its decision;

(3) air-ground contacts should be made with the air traffic services unit designated to provide air traffic advisory service within the advisory airspace or portion thereof.

(b) Aircraft not using the air traffic advisory service

(1) Aircraft wishing to conduct IFR flights within advisory airspace, but not electing to use the air traffic advisory service, should nevertheless submit a flight plan, and notify changes made thereto to the unit providing that service.

(2) IFR flights intending to cross an advisory route should do so as nearly as possible at an angle of 90 degrees to the direction of the route and at a level, appropriate to its track, selected from the tables of cruising levels prescribed for use by IFR flights operating outside controlled airspace.

GM1 SERA.6001(a)(6) Classification of airspaces

AIR TRAFFIC ADVISORY SERVICE

The objective of the air traffic advisory service is to make information on collision hazards more effective than it would be in the mere provision of flight information service. It may be provided to aircraft conducting IFR flights in advisory airspace or on advisory routes (Class F airspace). Such areas or routes will be specified by the State concerned.

GM2 SERA.6001(a)(6) Classification of airspaces

FLIGHT PLAN CHANGES IN CLASS F AIRSPACE

It is assumed that a pilot will not effect a change in the current flight plan until he or she has notified the intended change to the appropriate air traffic services unit and, if practicable, has received acknowledgement or relevant advice.

GM3 SERA.6001(a)(6) Classification of airspaces

CLEARANCES TO FLIGHTS OPERATING PARTIALLY IN CLASS F AIRSPACE

When a flight is operating or about to operate in a control area to continue eventually into an advisory area or along an advisory route, a clearance may be issued for the whole route, but the clearance as such, or revisions thereto, applies only to those portions of the flight conducted within control areas and control zones. Advice or suggestions would be provided as necessary for the remaining portion of the route.

GM1 SERA.6005(d) Requirements for communications, SSR transponder and electronic conspicuity in U-space airspace

PUBLICATION OF RADIO MANDATORY ZONES AND TRANSPONDER MANDATORY ZONES

For guidance on the publication of radio mandatory zones and transponder mandatory zones please refer to points AMC1 AIS.OR.325 and GM1 AIS.OR.325 'Aeronautical charts' of Regulation (EU) 2017/373.

AMC1 SERA.8012 Application of wake turbulence separation

CATEGORISATION OF AIRCRAFT FOR THE PURPOSES OF WAKE TURBULENCE SEPARATION MINIMA

Wake turbulence separation minima should be based on a grouping of aircraft types into four categories according to the maximum certificated take-off mass as follows:

(a) SUPER (J) aircraft types listed as such in ICAO Doc 8643 'Aircraft Type Designator, latest edition;

(b) HEAVY (H) — all aircraft types of 136 000 kg or more, with the exception of aircraft types as in point (a);

(c) MEDIUM (M) — aircraft types less than 136 000 kg but more than 7 000 kg; and

(d) LIGHT (L) — aircraft types of 7 000 kg or less.

AMC1 SERA.8015(b)(1) Air traffic control clearances

HORIZONTAL SPEED CONTROL INSTRUCTIONS

Speed control instructions should remain in effect unless explicitly cancelled or amended by the air traffic controller.

AMC2 SERA.8015(b)(1) Air traffic control clearances

SID AND STAR SPEED RESTRICTIONS

The flight crew should comply with published SID and STAR speed restrictions unless the restrictions are explicitly cancelled or amended by the air traffic controller.

GM1 SERA.8015(b)(1) Air traffic control clearances

HORIZONTAL SPEED CONTROL INSTRUCTIONS

Cancellation of any speed control instruction does not relieve the flight crew of compliance with the speed limitations associated with airspace classifications as specified in Appendix 4.

GM2 SERA.8015(b)(1) Air traffic control clearances

SID AND STAR SPEED RESTRICTIONS

Some SID and STAR speed restrictions ensure containment within RNAV departure or arrival procedure (e.g. maximum speed associated with a constant radius arc to a fix (RF) leg).

GM1 SERA.8015(b)(46) Air traffic control clearances

GM1 SERA.8015(b)(8) Air traffic control clearances

VECTORING TO PILOT-INTERPRETED FINAL APPROACH AID

When clearance for the approach is issued, the aircraft is expected to maintain the last assigned level until intercepting the specified or nominal glide path of the approach procedure. If the air traffic controller requires an aircraft to intercept the glide path at a level other than a level flight segment depicted on the instrument approach chart, the air traffic controller should instruct the pilot to maintain the particular level until established on the glide path.

GM1 SERA.8015(d)(3)(ii) Air traffic control clearances

USE OF CERTAIN PHRASES IN A CLEARANCE

The phrase 'cleared flight planned route' may be used to describe any route or portion thereof, provided that the route or portion thereof is identical to that filed in the flight plan and sufficient routing details are given to definitely establish the aircraft on its route. The phrases 'cleared (designation) departure' or 'cleared (designation) arrival' may be used when standard departure or arrival routes have been established and published in AIPs.

GM1 SERA.8015(gec) Air traffic control clearances

[…]

AMC1 SERA.8020(b) Adherence to current flight plan

ADHERENCE TO THE TRUE MACH NUMBER

(a) Aircraft subject to the Mach number technique should adhere to the true Mach number approved by ATC and should request ATC approval before making any changes thereto. If it is essential to make an immediate temporary change in the Mach number (e.g. due to turbulence), ATC should be notified as soon as possible that such a change has been made.

(b) If it is not feasible, due to aircraft performance, to maintain the last assigned Mach number during en-route climbs and descents, pilots of the aircraft concerned should advise ATC at the time of the climb/descent request.

AMC1 SERA.8025(a) Position reports

TRANSMISSION OF POSITION REPORTS

(a) In the absence of designated reporting points, position reports should be made by the aircraft as soon as possible after the first half hour of the flight and at hourly intervals thereafter.

(b) Under conditions specified by the competent authority, flights may be exempted from the requirement to make position reports at each designated compulsory reporting point or interval. In applying this, account should be taken of the meteorological requirement for the making and reporting of routine aircraft observations.

GM1 SERA.10001 Application

ALERTING SERVICE — PROMULGATION OF NOTAM FOR SEARCH AND RESCUE OPERATIONS

It may be advisable, in case of a search and rescue operation of a substantial duration, to promulgate by NOTAM the lateral and vertical limits of the area of a search and rescue action, and to warn aircraft not engaged in actual search and rescue operations and not controlled by air traffic control to avoid such areas unless otherwise authorised by the appropriate air traffic services unit.

GM1 SERA.11001 General

EMERGENCY DESCENT PROCEDURES

(a) When an aircraft ~~operated as a controlled flight~~ experiences sudden decompression or a malfunction requiring an emergency descent, the ~~aircraft should, if able~~pilot should take the following steps as soon as practicable in the order appropriate for the circumstance:

(1) ~~initiate a turn away from the assigned route or track before commencing the emergency descent~~navigate as deemed appropriate by the pilot;

(2) advise the appropriate AT~~C~~S unit ~~as soon as possible~~ of the emergency descent and, if able, intentions;

(3) set transponder to Code 7700 and, if applicable, select the appropriate emergency mode on the automatic dependent surveillance~~/controller–pilot data link communications (ADS/CPDLC) system, if applicable~~-broadcast and or automatic dependent surveillance-contract (ADS-B/ADS-C);

(4) turn on aircraft exterior lights (commensurate with appropriate operating limitations);

(5) watch for conflicting traffic both visually and by reference to airborne collision avoidance system (ACAS) (if equipped); and

(6) when emergency descent is complete, coordinate ~~its~~ further intentions with the appropriate AT~~C~~S unit.

(b) The aircraft ~~is~~ should not ~~to~~ descend below the lowest published minimum altitude that will provide a minimum vertical clearance of 300 m (1 000 ft) or, in designated mountainous terrain, of 600 m (2 000 ft) above all obstacles located in the area specified.

(c) ~~Immediately upon recognising that an emergency descent is in progress, ATC units are to acknowledge the emergency on radiotelephony.~~

~~In particular, when recognising that an emergency descent is in progress, ATC may, as required by the situation:~~

~~(1) suggest a heading to be flown, if able, by the aircraft carrying out the emergency descent in order to achieve separation from other aircraft concerned;~~

~~(2) state the minimum altitude for the area of operation, only if the level-off altitude stated by the pilot is below such minimum altitude, together with the applicable QNH altimeter setting; and~~

~~(3) as soon as possible, provide separation from conflicting traffic, or issue essential traffic information, as appropriate.~~

~~When deemed necessary, ATC will broadcast an emergency message, or cause such message to be broadcast, to other aircraft concerned to warn them of the emergency descent.~~Upon recognition that an aircraft is making an emergency descent, all appropriate actions should be taken immediately by the air traffic services unit to safeguard all aircraft concerned. Appropriate actions may include the following, in the order appropriate for the circumstance:

(1) broadcasting an emergency message;

(2) issuing traffic information and/or instructions to aircraft affected by the descent;

(3) advising the minimum flight altitude and altimeter setting for the area of operation; and

(4) informing any other air traffic services units which may be affected by the emergency descent.

(d) Unless specifically instructed by the air traffic services unit to clear the area or threatened by immediate danger, the pilot of an aircraft receiving emergency descent broadcast should take the following actions:

(1) continue according to current clearance and maintain listening watch on the frequency in use for any further instructions from the air traffic services unit; and

(2) watch for conflicting traffic both visually and by reference to ACAS (if equipped).

GM~~2~~1 SERA.11015 Interception

[…]

AMC1 SERA.13015 Onboard aircraft identification setting

AIRCRAFT IDENTIFICATION SETTING

(a) The aircraft identification transmitted should conform to the format specified for Item 7 of the ICAO flight plan form.

(b) The competent authority should only authorise aircraft operators to use other than aircraft registration as aircraft identification when operating without a flight plan provided that:

(1) the aircraft operator demonstrates that procedures have been implemented to ensure uniqueness of the aircraft identification for flights that might operate simultaneously;

(2) the air traffic services providers have indicated that the air traffic services surveillance systems are capable of managing duplication of Mode S aircraft identification;

(3) the need for individual identification for other authorities is addressed accordingly.

GM1 SERA.13015 Onboard aircraft identification setting

OPERATION OF ADS-B TRANSMITTERS

To indicate that it is in a state of emergency or to transmit other urgent information, an aircraft equipped with ADS-B might operate the emergency and/or urgency mode in the following cases:

(a) emergency;

(b) communication failure;

(c) unlawful interference;

(d) minimum fuel; and/or

(e) medical.

GM2 SERA.13015 Onboard aircraft identification setting

OPERATION OF ADS-B TRANSMITTERS

Some aircraft equipped with first-generation ADS-B avionics do not have the capability described in GM1 SERA.13015 and only have the capability to transmit a general emergency alert regardless of the code selected by the pilot.

GM3 SERA.13015 Onboard aircraft identification setting

AIRCRAFT IDENTIFICATION SETTING

As an example of a mechanism that assures the uniqueness of aircraft call signs to incorporate into an operations manual, as required by point (b)(1) of AMC1 SERA.13015, aircraft operators may elect to assign each pilot-in-command or each airframe with a unique number, which may also be augmented with the addition of letters. The call sign consisting of the operator designator issued by ICAO and the unique number together with any augmenting letter is to be inserted into the mode S identification feature prior to departure and used in all radio communications unless instructed otherwise by air traffic services.

GM4 SERA.13015 Onboard aircraft identification setting

DUPLICATED AIRCRAFT IDENTIFICATION

For demonstrating the resilience of the ATS surveillance system to duplicated aircraft identification, as prescribed in point (b)(2) of AMC1 SERA.13015, it is normally enough to indicate that a duplicated downlinked aircraft identification would not affect, or reduce in any form, the performance of the surveillance tracker for generating and validating system tracks. In the case of a multi-sensor tracking system, using surveillance information from sensors from neighbouring air traffic services providers, indication that their surveillance tracker is not affected by potential duplication of the aircraft identification is needed.

GM5 SERA.13015 Onboard aircraft identification setting

AIRCRAFT IDENTIFICATION SETTING

The ATS surveillance information used by an air navigation service provider is in many Member States also used by other authorities (e.g. air defence, search and rescue). The impact, if any, of allowing aircraft operating without a flight plan to transmit aircraft identification other than aircraft registration should be assessed and documented accordingly, as prescribed in point (b)(3) of AMC1 SERA.13015.

Appendix 1 to AMC1 SERA.14001 General

1. ATC PHRASEOLOGIES

1.1 General

Section	*Circumstances*	*Phraseologies*	*Applicable to* ATC	FIS
[…]				
1.1.2	Level changes, reports and rates	[…]		
	~~…clearance to cancel level restriction(s) of the vertical profile of a SID during climb~~	~~z) CLIMB TO *(level)* [LEVEL RESTRICTION(S) (*SID designator*) CANCELLED *(or)* LEVEL RESTRICTION(S) *(SID designator)* AT *(point)* CANCELLED];~~	~~☑~~	~~☐~~
	~~…clearance to cancel level restriction(s) of the vertical profile of a STAR during descent~~	~~aa) DESCEND TO *(level)* [LEVEL RESTRICTION(S) *(STAR designator)* CANCELLED *(or)* LEVEL RESTRICTION(S) *(STAR designator)* AT *(point)* CANCELLED].~~	~~☑~~	~~☐~~
	…clearance to climb on a SID which has published level and/or speed restrictions, where the pilot is to climb to the cleared level and comply with published level restrictions, follow the lateral profile of the SID, and comply with published speed restrictions or ATC-issued speed control instructions as applicable.	z) CLIMB VIA SID TO *(level)*	☑	☐
	…clearance to cancel level restriction(s) of the vertical profile of a SID during climb	aa) [CLIMB VIA SID TO *(level)*], CANCEL LEVEL RESTRICTION(S)	☑	☐
	…clearance to cancel specific level restriction(s) of the	bb) [CLIMB VIA SID TO *(level)*], CANCEL LEVEL RESTRICTION(S) AT *(point(s))*	☑	☐

	vertical profile of a SID during climb			
	…clearance to cancel speed restrictions of a SID during climb	cc) [CLIMB VIA SID TO *(level)*], CANCEL SPEED RESTRICTION(S)	☑	☐
	…clearance to cancel specific speed restrictions of a SID during climb	dd) [CLIMB VIA SID TO *(level)*], CANCEL SPEED RESTRICTION(S) AT *(point(s))*	☑	☐
	…clearance to climb and to cancel level and speed restrictions of a SID	ee) CLIMB UNRESTRICTED TO *(level) (or)* CLIMB TO *(level)*, CANCEL LEVEL AND SPEED RESTRICTIONS	☑	☐
	…clearance to descend on a STAR which has published level and/or speed restrictions, where the pilot is to descend to the cleared level and comply with published level restrictions, follow the lateral profile of the STAR, and comply with published speed restrictions or ATC-issued speed control instructions	ff) DESCEND VIA STAR TO *(level)*	☑	☐
	…clearance to cancel level restrictions of a STAR during descent	gg) [DESCEND VIA STAR TO *(level)*], CANCEL LEVEL RESTRICTION(S)	☑	☐
	…clearance to cancel specific level restrictions of a STAR during descent	hh) [DESCEND VIA STAR TO *(level)*], CANCEL LEVEL RESTRICTION(S) AT *(point(s))*	☑	☐
	…clearance to cancel speed restrictions of a STAR during descent	ii) [DESCEND VIA STAR TO *(level)*], CANCEL SPEED RESTRICTION(S)	☑	☐
	…clearance to cancel specific speed restrictions of a STAR during descent	jj) [DESCEND VIA STAR TO *(level)*], CANCEL SPEED RESTRICTION(S) AT *(point(s))*	☑	☐
	…clearance to descend and to cancel speed and level restrictions of a STAR	kk) DESCEND UNRESTRICTED TO *(level)* or DESCEND TO *(level)*, CANCEL LEVEL AND SPEED RESTRICTIONS	☑	☐

[…]

1.1.11	Aerodrome information	a) [*(location)*] RUNWAY *(number)* SURFACE CONDITION [CODE *(three-digit number)*];

		[…]		

[…]

1.2.2	Indication of route and clearance limit	[…] b) TO *(location)*, *followed as necessary by:* […]		
	Note. – Conditions associated with the use of this phrase are in SERA.8015(d)(3) and in ATS.TR.235(b)(3) of and GM1 ATS.TR.235(b)(3)(i) to Regulation (EU) 2017/373.	3) ~~VIA~~ FLIGHT PLANNED ROUTE; […]	☑	☐

[…]

1.3.1	Departure instructions	[…]		
	Note. – Conditions associated with the use of this phrase are in SERA.8015(d)(3) and GM1 SERA.8015(d)(3)(ii), and in ATS.TR.235(b)(3) of and GM1 ATS.TR.235(b)(3)(i) to Regulation (EU) 2017/373.	f) CLEARED ~~VIA~~ *(designation)* DEPARTURE	☑	☐
	…clearance to proceed direct with advance notice of a future instruction to rejoin the SID	g) CLEARED DIRECT *(waypoint)*, CLIMB TO *(level)*, EXPECT TO REJOIN SID [*(SID designator)*] [AT *(waypoint)*] *then* REJOIN SID [*(SID designator)*] [AT *(waypoint)*]	☑	☐
		h) CLEARED DIRECT *(waypoint)*, CLIMB TO *(level)* *then* REJOIN SID *(SID designator)* AT *(waypoint)*	☑	☐
1.3.2	Approach instructions *Note. – Conditions associated with the use of this phrase are in SERA.8015(d)(3) and GM1 SERA.8015(d)(3)(ii), and in ATS.TR.235(b)(3) of and GM1 ATS.TR.235(b)(3)(i) to Regulation (EU) 2017/373.*	a) CLEARED ~~(or PROCEED) VIA~~ *(designation)* ARRIVAL;	☑	☐

		b) CLEARED TO *(clearance limit)* ~~VIA~~ *(designation)*;	☑	☐
		c) CLEARED (*or* PROCEED) ~~VIA~~ *(details of the route to be followed)*;	☑	☐
	…clearance to proceed direct with advance notice of a future instruction to rejoin the STAR	d) CLEARED DIRECT *(waypoint)*, DESCEND TO *(level)*, EXPECT TO REJOIN STAR [*(STAR designator)*] AT *(waypoint)* then REJOIN STAR [*(STAR designator)*] [AT *(waypoint)*];	☑	☐
		e) CLEARED DIRECT *(waypoint)*, DESCEND TO *(level)* then REJOIN STAR *(STAR designator)* AT *(waypoint)*;	☑	☐
		~~d)~~f) CLEARED *(type of approach)* APPROACH [RUNWAY *(number)*];		
		Editorial Note. – Subsequent bullets to be renumbered accordingly.		

[…]

2.1.6	Speed control	[…]		
	…instruction to adhere to the speed published on the arrival and departure charts	k) RESUME PUBLISHED SPEED;	☑	☐
		~~k)~~l) NO [ATC] SPEED RESTRICTIONS.	☑	☐

[…]

2.2.2	Vectoring for ILS and other approach procedures	[…]		
		b) YOU WILL INTERCEPT (FINAL APPROACH COURSE~~)~~ ~~or~~*or radio aid*) *(distance)* FROM (*significant point or* TOUCHDOWN);	☑	☐
		[…]	☑	☐

[…]

5. GROUND CREW/FLIGHT CREW PHRASEOLOGIES

[…]

5.2 De/anti-icing operations

Section	*Circumstances*	*Phraseologies*
5.2.1	Prior to de-icing/anti-icing (ground crew (iceman)/flight crew)	a) STANDING BY TO DE-ICE. CONFIRM BRAKES SET AND TREATMENT REQUIRED; *b) [AFFIRM] BRAKES SET, REQUEST *(type of de/anti-icing treatment and areas to be treated)*; c) HOLD POSITION AND CONFIRM AIRCRAFT CONFIGURED; *d) [AFFIRM] AIRCRAFT CONFIGURED, READY FOR DE-ICING; e) DE-ICING STARTS NOW. '*' denotes pilot transmission.
5.2.2	Upon concluding de-icing/anti-icing procedure …for de-icing operation …for a two-step de-icing/anti-icing operation …de-icing/anti-icing complete	a) DE-ICING ON *(areas treated)* COMPLETE. ADVISE WHEN READY FOR INFORMATION; b) TYPE OF FLUID (Type I *or* II *or* III *or* IV); c) HOLDOVER TIME STARTED AT *(time)*; d) ANTI-ICING CODE *(appropriate anti-icing code)*. *Note. – Anti-icing code example:* *A de-icing/anti-icing procedure whose last step is the use of a mixture of 75 % of a Type II fluid and 25 % of water, commencing at 13:35 local time, is recorded as follows:* *TYPE II/75 13:35 (followed by the complete name of the anti-icing fluid)* e) FINAL STEP STARTED AT *(time)*; f) POST DE-ICING CHECK COMPLETED; g) PERSONNEL AND EQUIPMENT CLEAR OF AIRCRAFT.
5.2.3	Abnormal operations	

…for spray nozzle proximity sensor activation	a) BE ADVISED NOZZLE PROXIMITY ACTIVATION ON *(significant point on aircraft)* [NO VISUAL DAMAGE *or* DAMAGE *(description of damage)* OBSERVED] [SAY INTENTIONS];
…for other aircraft having an emergency in the de-icing bay	b) EMERGENCY IN DE-ICING BAY *(de-icing bay number)* [SHUT DOWN ENGINES *or* STANDBY FOR FURTHER INSTRUCTIONS].

GM1 SERA.14035(a)(1) Transmission of numbers in radiotelephony

CALL SIGN, HEADING, RUNWAY AND WIND

[…]

~~runway~~	~~transmitted as~~
~~27~~	~~runway **two seven**~~
~~30~~	~~runway **three zero**~~
~~**wind direction and speed**~~	~~**transmitted as**~~
~~200 degrees 70 knots~~	~~wind **two zero zero** degrees **seven zero** knots~~
~~160 degrees 18 knots gusting 30 knots~~	~~wind **one six zero** degrees **one eight** knots gusting **three zero knots**~~

runway	transmitted as
27	runway **two seven**
30	runway **three zero**

wind direction and speed	transmitted as
200 degrees 70 knots	wind **two zero zero** degrees **seven zero** knots
160 degrees 18 knots gusting 30 knots	wind **one six zero** degrees **one eight** knots gusting **three zero knots**

GM5 SERA.14035(a)(2) Transmission of numbers in radiotelephony

INDICATED AIRSPEED

The following examples illustrate the application.

Indicated airspeed	transmitted as
250 knots	**two five zero** knots
300 knots	**three hundred** knots

AMC1 SERA.14050 Radiotelephony call signs for aircraft

AIRCRAFT RADIOTELEPHONY CALL SIGN SETTING

Unless otherwise instructed by the air traffic controller in accordance with point (a) of SERA.14055, the mode S or ADS-B equipped aircraft should use a radiotelephony call sign corresponding to the aircraft identification specified in the flight plan or when operating without a flight plan, a

radiotelephony call sign corresponding to the aircraft identification transmitted by the mode S transponder or ADS-B transmitter.

AMC1 SERA.14083(b)(1) Radio communication failure procedures

ATC ATTEMPT TO ESTABLISH COMMUNICATION

The air traffic controller should determine whether or not the aircraft's receiver is functioning by instructing the aircraft on the channel so far used, or on any other available channel on which it is believed that the aircraft might be listening, to acknowledge by making a specified manoeuvre and by observing the aircraft's track, or by instructing the aircraft to operate IDENT or to make SSR code and/or ADS-B transmission changes. Any manoeuvring instructions should be such that the aircraft would regain its current cleared track after having complied with the instructions received.

GM1 SERA.14083(b)(1) Radio communication failure procedures

ATC ATTEMPT TO ESTABLISH COMMUNICATION

Some aircraft equipped with first-generation ADS-B avionics do not have the capability of squawking IDENT while the emergency and/or urgency mode is selected.

AMC1 SERA.14083(b)(3) Radio communication failure procedures

BLIND TRANSMISSION OF OTHER MESSAGES

Appropriate information describing the action taken by the air traffic control unit, or instructions justified by any emergency situation, should be transmitted by blind transmission for the attention of the aircraft concerned, on the frequencies available on which the aircraft is believed to be listening, including, as far as practicable, the voice frequencies of available radio navigation or approach aids. Information should also be given concerning:

(a) meteorological conditions favourable to a cloud-breaking procedure in areas where congested traffic may be avoided; and

(b) meteorological conditions at suitable aerodromes.

GM1 SERA.14083(c) Radio communication failure procedures

RADIO COMMUNICATION FAILURE PROCEDURE — MULTIPLE AIRCRAFT

The air-ground voice communication failure procedures specifically address failure of communications affecting a single aircraft. In situations where multiple aircraft may be involved, especially when operating in an environment where high-frequency communications are used as primary means for voice communication, the safety of operations is best assured when aircraft adhere to the last ATC clearance received and acknowledged, similar to the case of ground radio station failure.

GM2 SERA.14083(c) Radio communication failure procedures

LANDING AT THE NEAREST SUITABLE AERODROME

When assessing the suitability for landing of an aerodrome, the pilot should consider runway characteristics, aerodrome facilities and the complexity of the operating environment at that aerodrome.

GM1 SERA.14083(c)(4)(i)(B) Radio communication failure procedures

AIRCRAFT ADS-B CAPABILITIES

Some aircraft equipped with first-generation ADS-B avionics have the capability to transmit a general emergency alert only, regardless of the code selected by the pilot.

AMC1 SERA.14083(d) Radio communication failure procedures

ATC ACTIONS IN CASE OF RADIO COMMUNICATION FAILURE

(a) Except for the case when the aircraft flying in accordance with instrument flight rules and experiencing communication failure transmits A7601, the air traffic controller should apply separation between such aircraft and other aircraft, based on the assumption that the aircraft will operate according to SERA.14083(c)(3) and (4), until:

(1) it is determined that the aircraft is following a procedure differing from those in SERA.14083(c)(3) and (4) (e.g. observing that the aircraft set the transponder code 7601) and (b) should be applied;

(2) through the use of electronic or other aids, the air traffic controller determines that actions differing from those required by SERA.14083(c)(3) and (4) may be taken without impairing safety; or

(3) positive information is received that the aircraft has landed.

(b) The air traffic controller should take all possible actions to safeguard all aircraft concerned based on the assumption that an aircraft operating in accordance with visual flight rules or an aircraft operating in accordance with instrument flight rules transmitting A7601 will continue to fly in visual meteorological conditions, land at the nearest suitable aerodrome, and report its arrival by the most expeditious means to the appropriate air traffic services unit.

(c) Pertinent information should be given to other aircraft in the vicinity of the position or presumed position of the aircraft experiencing the failure.

(d) If circumstances indicate that the controlled flight experiencing a communication failure might proceed to (one of) the alternate aerodrome(s) specified in the filed flight plan, the air traffic control unit(s) serving the alternate aerodrome(s) and any other air traffic control units that might be affected by a possible diversion should be informed of the circumstances of the failure and requested to attempt to establish communication with the aircraft at a time when the aircraft could possibly be within communication range. This should apply particularly when, by agreement with the operator or a designated representative, a clearance has been transmitted blind to the aircraft concerned to proceed to an alternate aerodrome, or when meteorological conditions at the aerodrome of intended landing are such that a diversion to an alternate is considered likely.

(e) When an air traffic control unit at the arrival aerodrome has suspended normal operations in anticipation of the arrival of an aircraft experiencing communication failure, and that aircraft has not reported or landed within 30 minutes after:

(1) the estimated time of arrival indicated by the pilot;

(2) the estimated time of arrival calculated by the area control centre; or

(3) the last acknowledged expected approach time, whichever is latest,

pertinent information concerning the aircraft should be forwarded by ATC to aircraft operators, or their designated representatives, and pilots-in-command of any aircraft concerned, and normal control resumed if they so desire. It is the responsibility of the aircraft operators, or their designated representatives, and pilots-in-command of aircraft to determine whether they will resume normal operations or take other action.

GM1 SERA.14083(d) Radio communication failure procedures

SEPARATION FOR ATS SURVEILLANCE SERVICES

When a controlled aircraft experiencing complete communication failure is operating or expected to operate in an area and at flight levels where an ATS surveillance service is applied, separation specified in AMC1 ATS.TR.210(c)(2) to Regulation (EU) 2017/373 may continue to be used.

GM2 SERA.14083(d) Radio communication failure procedures

ALERTING SERVICE

The pertinent information to be provided as described in point (e) of AMC1 SERA.14083(d) does not preclude compliance with the requirements on alerting service as described in ATS.TR.405(a)(1) of Regulation (EU) 2017/373.

GM1 SERA.14085 Use of blind transmission

ATC SERVICE PROVISION TO OTHER FLIGHTS

The provision of air traffic control service to other flights operating in the airspace concerned will be based on the premise that an aircraft experiencing communication failure will comply with SERA.14083.

GM1 SERA.14090(a) Specific communication procedures

VEHICLE TRAFFIC ON THE MANOEUVRING AREA

Specific communication procedures and signals are detailed in point 3.1.3 of Appendix 1 ‘Signals’.

GM1 SERA.14090(d)(4) Specific communication procedures

ACTONS TO BE TAKEN WHEN AIR TRAFFIC CONTROLLER-PILOT COMMUNICATIONS ARE ESTABLISHED

Pilots should contact ATC as soon as possible with requests for clearance in order to provide adequate time for the request to be assessed and acted upon.

AMC1 SERA.14090(e) Specific communication procedures

CLEARANCES ON STANDARD INSTRUMENT DEPARTURE (SID)

(a) Clearances to aircraft on a SID with remaining published level and/or speed restrictions should indicate if such restrictions are to be followed or are cancelled. The following phraseologies should be used with the following meanings:

(1) CLIMB VIA SID TO (level):

(i) climb to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the SID; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(2) CLIMB VIA SID TO (level), CANCEL LEVEL RESTRICTION(S):

(i) climb to the cleared level; published level restrictions are cancelled;

(ii) follow the lateral profile of the SID; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(3) CLIMB VIA SID TO (level), CANCEL LEVEL RESTRICTION(S) AT (point(s)):

(i) climb to the cleared level; published level restriction(s) at the specified point(s) are cancelled;

(ii) follow the lateral profile of the SID; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(4) CLIMB VIA SID TO (level), CANCEL SPEED RESTRICTION(S):

(i) climb to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the SID; and

(iii) published speed restrictions and ATC-issued speed control instructions are cancelled.

(5) CLIMB VIA SID TO (level), CANCEL SPEED RESTRICTION(S) AT (point(s)):

(i) climb to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the SID; and

(iii) published speed restrictions are cancelled at the specified point(s).

(6) CLIMB UNRESTRICTED TO (level) or CLIMB TO (level), CANCEL LEVEL AND SPEED RESTRICTION(S):

(i) climb to the cleared level; published level restrictions are cancelled;

(ii) follow the lateral profile of the SID; and

(iii) published speed restrictions and ATC-issued speed control instructions are cancelled.

(b) If there are no remaining published level or speed restrictions on the SID, the phrase CLIMB TO (level) should be used.

(c) When subsequent speed restriction instructions are issued, and if the cleared level is unchanged, the phrase CLIMB VIA SID TO (level) should be omitted.

(d) When a departing aircraft is cleared to proceed direct to a published waypoint on the SID, the speed and level restrictions associated with the bypassed waypoints are cancelled. All remaining published speed and level restrictions should remain applicable.

(e) When a departing aircraft is vectored or cleared to proceed to a point that is not on the SID, all published speed and level restrictions of the SID are cancelled and the air traffic controller should:

(1) reiterate the cleared level;

(2) provide speed and level restrictions as necessary; and

(3) notify the pilot if it is expected that the aircraft will be instructed to subsequently rejoin the SID.

(f) ATC instructions to an aircraft to rejoin a SID should include:

(1) the designator of the SID to be rejoin, unless advance notification of rejoin has been provided in accordance with point (e);

(2) the cleared level in accordance with point (a); and

(3) the position at which it is expected to rejoin the SID.

AMC2 SERA.14090(e) Specific communication procedures

CLEARANCES ON STANDARD INSTRUMENT ARRIVAL (STAR)

(a) Clearances to aircraft on a STAR with remaining published level and/or speed restrictions should indicate if such restrictions are to be followed or are cancelled. The following phraseologies should be used with the following meaning:

(1) DESCEND VIA STAR TO *(level)*:

(i) descend to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the STAR; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(2) DESCEND VIA STAR TO *(level)*, CANCEL LEVEL RESTRICTION(S):

(i) descend to the cleared level; published level restrictions are cancelled;

(ii) follow the lateral profile of the STAR; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(3) DESCEND VIA STAR TO *(level)*, CANCEL LEVEL RESTRICTION(S) AT *(point(s))*:

(i) descend to the cleared level; published level restriction(s) at the specified point(s) are cancelled;

(ii) follow the lateral profile of the STAR; and

(iii) comply with published speed restrictions or ATC-issued speed control instructions as applicable.

(4) DESCEND VIA STAR TO *(level)*, CANCEL SPEED RESTRICTION(S):

(i) descend to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the STAR; and

(iii) published speed restrictions and ATC-issued speed control instructions are cancelled.

(5) DESCEND VIA STAR TO *(level)*, CANCEL SPEED RESTRICTION(S) AT *(point(s))*:

(i) descend to the cleared level and comply with published level restrictions;

(ii) follow the lateral profile of the STAR; and

(iii) published speed restrictions are cancelled at the specified point(s).

(6) DESCEND UNRESTRICTED TO *(level)* or DESCEND TO *(level)*, CANCEL LEVEL AND SPEED RESTRICTION(S):

(i) descend to the cleared level; published level restrictions are cancelled;

(ii) follow the lateral profile of the STAR; and

(iii) published speed restrictions and ATC-issued speed control instructions are cancelled.

(b) If there are no remaining published level or speed restrictions on the STAR, the phrase DESCEND TO *(level)* should be used.

(c) When subsequent speed restriction instructions are issued and if the cleared level is unchanged, the phrase DESCEND VIA STAR TO *(level)* should be omitted.

(d) When an arriving aircraft is cleared to proceed direct to a published waypoint on the STAR, the speed and level restrictions associated with the bypassed waypoints are cancelled. All remaining published speed and level restrictions should remain applicable.

(e) When an arriving aircraft is vectored or cleared to proceed to a point that is not on the STAR, all the published speed and level restrictions of the STAR are cancelled and the air traffic controller should:

(1) reiterate the cleared level;

(2) provide speed and level restrictions as necessary; and

(3) notify the pilot if it is expected that the aircraft will be instructed to subsequently rejoin the STAR.

(f) ATC instructions to an aircraft to rejoin a STAR should include:

(1) the designator of the STAR to be rejoined, unless advance notification of rejoin has been provided in accordance with point (e);

(2) the cleared level on rejoining the STAR in accordance with point (a); and

(3) the position at which it is expected to rejoin the STAR.

GM1 SERA.14100 Notification of suspected communicable diseases or other public health risk on board an aircraft

SYMPTOMS OF SUSPECTED COMMUNICABLE DISEASES

A communicable disease may be suspected and require further evaluation if a person has certain combined signs or symptoms: for example, fever (temperature of 38°C/100°F or greater), appearing obviously unwell, persistent coughing, impaired breathing, persistent diarrhoea, persistent vomiting, skin rash, bruising or bleeding without previous injury or confusion of recent onset.

GM2 SERA.14100 Notification of suspected communicable diseases or other public health risk on board an aircraft

ACTIONS OF THE PUBLIC HEALTH AUTHORITY

The public health authority (PHA) may contact the representative or operating agency of the aircraft operator as well as the aerodrome operator, if applicable, for subsequent coordination with the aircraft concerning clinical details and aerodrome preparation. Depending on the communications facilities available to the aircraft operator or its designated representative, it may not be possible to communicate with the aircraft until it is closer to its destination. Apart from the initial notification to the air traffic services unit while en route, ATC communications channels should be avoided.

GM3 SERA.14100 Notification of suspected communicable diseases or other public health risk on board an aircraft

INFORMATION TO THE DEPARTURE AERODROME

The information to be provided to the departure aerodrome will prevent the potential spread of communicable disease, or other public health risk, through other aircraft departing from the same aerodrome.

GM4 SERA.14100 Notification of suspected communicable diseases or other public health risk on board an aircraft

MEANS OF TRANSMISSION OF INFORMATION

The Aeronautical Fixed Telecommunications Network (AFTN) (urgency message), telephone, fax or other means of transmission may be used by the air traffic services unit.