

BRASIL

MINISTÉRIO DA DEFESA – COMANDO DA AERONÁUTICA

DEPARTAMENTO DE CONTROLE DO ESPAÇO AÉREO

Av. General Justo, 160 – CEP 20021-130 – Rio de Janeiro/RJ

<http://www.decea.gov.br>

AIC

A

06 / 22

07 MAR 22

A-CDM AERODROME OPERATIONS

Period of validity: from 07 MAR 2022 to 31 DEC 2022.

1 RELIMINARY ARRANGEMENTS

1.1 PURPOSE

The purpose of this AIC is to disseminate A-CDM procedures for the Guarulhos - SP aerodrome (SBGR), as indicated in AIP, Part 3, Section AD2 SBGR.

1.2 SCOPE

This Circular applies to all aircraft that operate at the Guarulhos - SP aerodrome, except those specified in item 3.18 of this publication.

1.3 DEFINITIONS AND ABBREVIATIONS

1.3.1 DEFINITIONS

AERODROME

Defined area of land or water (which includes all of its buildings, facilities and equipment) destined totally or partially to the arrival, departure and movement of aircraft on the surface.

A-CDM AERODROME

Aerodrome that operates in accordance with the A-CDM concept, adopting the procedures provided during the phases of arrival, ground operations and departure.

AIRPORT OPERATIONAL DATABASE (AODB)

Centralized repository or database of operational systems at an aerodrome that provides real-time flight-related data.

AIRPORT OPERATIONS CENTER (AOC)

A-CDM partner responsible for managing air operations at the aerodrome.

GROUND HANDLING (GH)

A-CDM partner responsible for the ground handling services of the aircraft during the preparation (turn-round) phase of the aerodrome.

ACTUAL COMMENCE OF GROUND HANDLING TIME (ACGT)

Actual time when ground handling starts on an aircraft.

ACTUAL LANDING TIME (ALDT)

The actual time the aircraft lands on the runway.

ACTUAL IN-BLOCK TIME (AIBT)

Actual time when an aircraft receives the chocks at the parking position.

ACTUAL OFF-BLOCK TIME (AOBT)

Actual time at which the aircraft initiates departure-related movement.

ACTUAL READY TIME (ARDT)

Time when the aircraft is effectively ready for start up and/or push back.

ACTUAL START UP APPROVAL TIME (ASAT)

Actual time when the aircraft receives start up and/or push back approval from the ATC Unit.

ACTUAL START BOARDING TIME (ASBT)

Actual time when boarding a flight is actually initiated, considering the moment when passengers enter the boarding bridge or another means of transport to go to a remote boarding position.

ACTUAL START UP REQUEST TIME (ASRT)

Time when the pilot requests engines start up and/or push back clearance.

ESTIMATED IN-BLOCK TIME (EIBT)

The estimated time for an aircraft to receive the chocks at the parking position.

ESTIMATED LANDING TIME (ELDT)

The estimated time at which the aircraft will land on the runway.

SCHEDULED OFF-BLOCK TIME (SOBT)

Time when a flight is scheduled to depart from a parking position, according to the airport slot negotiated between the airline, airport administrator and regulatory agency.

TARGET OFF-BLOCK TIME (TOBT)

Time when the Aircraft Operator (AO) or Ground Handler (GH) **estimates** that an aircraft will be ready, all doors closed, boarding bridge removed (if applicable), push-back vehicle present and crew ready to start up/push back immediately upon reception of clearance from the control tower.

TARGET START UP APPROVAL TIME (TSAT)

The target time provided by the system in which the ATC Unit will seek to provide clearance for push back and/or start up. This time takes into account the TOBT informed by the AO/GH and other operational variables, as well as the aircraft traffic situation at the moment.

ATFM CALCULATED TAKE-OFF TIME (CTOT)

Time calculated by the ATFM Unit (NO) for the allocation of departure time based on the optimization of air traffic flow.

TARGET TAKE-OFF TIME (TTOT)

Estimated take off time based on TOBT and TSAT times. Before receiving the TSAT, the TTOT is calculated based on the flight's EOBT/TOBT.

MINIMUM DEPARTURE INTERVAL (MDI)

A tactical ATFM measure, applied when a departure flow rate is established.

CDM MESSAGES

Alert messages displayed on the ACISP platform for situational awareness of the status of each flight.

ATFM MEASURES

Procedures adopted to maximize the use of declared capacities and/ or to adjust the air traffic flow in a given portion of airspace, along a given route or at a given aerodrome, in order to avoid imbalance.

NETWORK OPERATOR (NO)

A-CDM partner responsible for managing air traffic flow and implementing ATFM measures. In Brazil, NO assignments are coordinated and implemented by CGNA.

AIRCRAFT OPERATOR (AO)

A-CDM partner responsible for the operation of aircraft as defined by current legislation.

AIRPORT CDM INFORMATION SHARING PLATFORM (ACISP)

TATIC TWR (A-CDM) system module for sharing information about the CDM aerodrome.

A-CDM PARTNER

A-CDM Partner is the party interested in the set of information generated by the A-CDM concept that works collaboratively in the A-CDM processes.

PRE-DEPARTURE SEQUENCER (PDS)

System referring to the A-CDM responsible for the sequencing of departures according to the informed TOBT, seeking an optimized sequence for the aerodrome.

AIRPORT SLOT

Permission given by the airport slot coordinator to the aircraft operator, duly coordinated with the regulatory agencies, for the use of the airport infrastructure.

TATIC

System used for air traffic information management by the local ATC Unit.

MINIMUM TURN-ROUND TIME (MTTT)

Minimum aircraft preparation time from arrival block time to “aircraft ready” for a new departure.

VALID TOBT

The TOBT that does not have restrictive CDM messages and, therefore, can be confirmed at the appropriate time for the purposes of receiving a TSAT.

CONFIRMED TOBT

Every valid TOBT that has reached confirmation time and, therefore, will receive its TSAT.

SCHEDULED FLIGHT

Public air transport service, offered to the general public and operated according to a previously published schedule or with regularity such that it constitutes a systematic series of easily identifiable flights.

NON-SCHEDULED FLIGHT

Public air transport service, offered to the general public, and which is not characterized as a scheduled air service.

1.3.2 ABBREVIATIONS

A-CDM	-	Airport Collaborative Decision Making
ACGT	-	Actual Commence of Ground Handling
ACISP	-	A-CDM Information Sharing Platform
AIBT	-	Actual In-Block Time
ALDT	-	Actual Landing Time
AODB	-	Airport Operational Database
AOBT	-	Actual Off-Block Time

AOC	-	Airport Operations Centre
AO	-	Aircraft Operator
ARDT	-	Actual Ready Time
ASAT	-	Actual Start up Approval Time
ASBT	-	Actual Start Boarding Time
ASRT	-	Actual Start Up Request Time
ATC	-	Air Traffic Control
ATFM	-	Air Traffic Flow Management
ATM	-	Air Traffic Management
ATS	-	Air Traffic Service
CCO	-	Operational Control Centre
CDM	-	Collaborative Decision Making
CGNA	-	Air Navigation Management Centre
CTOT	-	ATFM Calculated Take-off Time
ELDT	-	Estimated Landing Time
DECEA	-	Department of Airspace Control
GH	-	Ground Handling
MDI	-	Minimum Departure Interval
MTTT	-	Minimum Turn-Round Time
NO	-	Network Operator
PDS	-	Pre-Departure Sequencer
SBGR	-	São Paulo/Guarulhos International Airport
SOBT	-	Scheduled Off-Block Time
TATIC	-	Total Air Traffic Information Control
TOBT	-	Target Off-Block Time
TTOT	-	Target Take-off Time
TSAT	-	Target Start up Approval Time

2 GENERAL PROVISIONS

2.1 The Airport Collaborative Decision Making (A-CDM) is an operational concept within the context of ATM (Air Traffic Management) that seeks to improve operational efficiency, predictability and punctuality for the ATM network and for participating partners.

2.2 A-CDM needs a joint and collaborative work from the different partners in order to enable decision making based on better and more accurate information, in which each piece of information is obtained in a standardized manner for complete situational awareness of each partner involved.

2.3 The implementation of A-CDM at an aerodrome transforms many of the communication policies and procedures that have historically dominated the airport operations environment, bringing substantial improvements to all A-CDM partners involved, such as:

- a) Better predictability;
- b) Punctuality performance;
- c) Possibility of automated and strategic ATFM measures;
- d) Reduction of ground movement costs;
- e) Airport infrastructure optimization;
- f) Reduced congestion in the aprons and taxiways; and
- g) Measurement of air traffic performance indicators.

2.4 At times, the objectives of each A-CDM partner are diffuse and can be contradictory or complementary. Each A-CDM partner may not have a complete understanding of the others' operations and priorities. However, all A-CDM partners have the primary objective of seeking efficient, regular and safe air transport for the benefit of the aeronautical community. To achieve this goal there needs to be a collaborative culture in place, seeking a more efficient use of the aerodrome. Thus, the guidelines contained in the specific provisions of this AIC must be strictly complied with to enable the implementation and dissemination of the A-CDM concept in the Brazilian aeronautical community.

3 SPECIFIC PROVISIONS

Below are the A-CDM procedures for operation at the Guarulhos - SP airport, as well as examples of how to use the ACISP platform, insertions and other pertinent data.

3.1 ACCESS TO THE AERODROME ACISP PLATFORM

3.1.1 Access to the ACISP platform will be by means of a computer with Internet access at <https://taticacdm.saipher.com.br>.

3.1.2 Access will be allowed to A-CDM partners through a user identifier (User-ID) and a password.

3.1.3 Accreditation for access to the platform must be made at <https://taticacdm.saipher.com.br>. If in doubt, the operator may contact the aerodrome's A-CDM support.

3.1.4 Viewing and entering information on the ACISP platform will take place according to the profile of each user.

3.1.5 The application for accessing the ACISP platform via mobile devices (summary version) can be obtained at <https://taticacdm.saipher.com.br>.

3.1.6 For the purposes of information control and security, all operations on the ACISP platform will be recorded by user, date and time of the event.

3.2 PRESENTATION OF FLIGHTS ON THE ACISP PLATFORM

3.2.1 *ARRIVALS*

3.2.1.1 Flights scheduled to arrive at SBGR will be presented in the “Arrivals” tab 3 (three) hours before their estimated landing time (ELDT).

3.2.2 *DEPARTURES*

3.2.2.1 Flights scheduled to depart from SBGR will be shown in the “Departures” tab 3 (three) hours before the EOBT.

3.2.2.2 The aircraft operator (AO), or Ground Handler (GH) when delegated by the AO, will be responsible for checking its respective flight on the ACISP platform. In case of lack of registration, it must contact the GRU CCO.

3.3 FLIGHT PLAN VALIDATION

Flights departing from the SBGR aerodrome will have the flight plan data confronted with data from the respective airport slots, such as: EOBT (Estimated Off-Block Time), aircraft type, destination aerodrome and aircraft registration (when informed in the flight plan).

3.4 CHANGE IN THE FLIGHT NETWORK (SCHEDULED TRANSPORT)

3.4.1 The aircraft operator (AO) shall update the GRU CCO (AOC) on the changes related to flights in its air flights schedule up to 1 (one) hour before the EOBT. The AOC will immediately update this information in its database (AODB) for updating the ACISP.

3.5 TOBT FIELD

3.5.1 On the ACISP platform, there will be a column for displaying the TOBT.

3.5.2 For reference and situational awareness only, until the user enters the TOBT manually, the ACISP platform will display a TOBT value based on the estimated arrival of the aircraft, minimum turn-round time (MTTT) and EOBT. **This value is for user reference only and will not be used automatically by the system.** The time will be displayed according to figure 1.

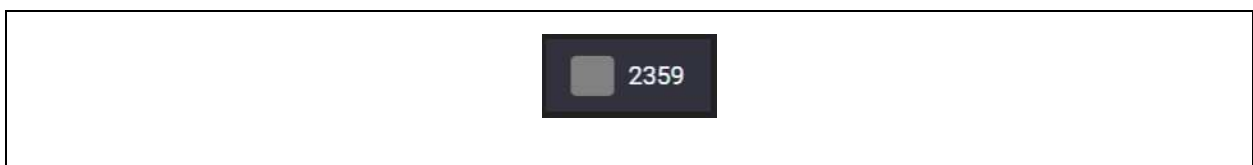


Figure 1 - Displaying of TOTBT based on estimated arrival of the aircraft

3.6 TOBT ENTERED BY THE USER

3.6.1 The aircraft operator (AO), or Ground Handler (GH), will be responsible for manually inserting its TOBT into the ACISP platform at least 30 (thirty) minutes before the proposed time.

3.6.2 The ACISP platform will only allow the insertion of TOBT in the period between -15/+45 minutes from the EOBT time.

3.6.3 After inserting a valid TOBT, the platform will be displayed according to Figure 2.

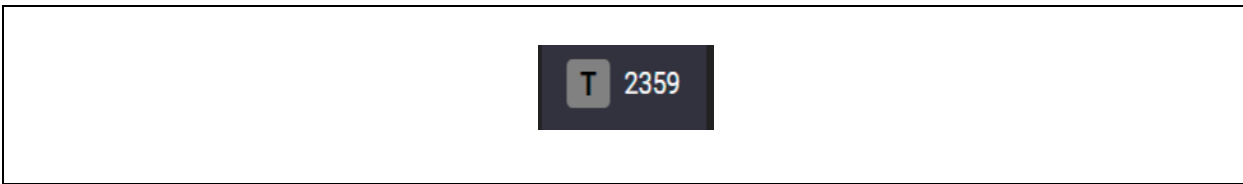


Figure 2 - Displaying after inserting a valid TOBT

3.6.4 If there is one or more restrictive CDM messages for the flight, the inserted TOBT will be displayed in yellow to alert the user of the condition so that he/she can solve the problem up to 30 minutes before TOBT, as indicated in Figure 3.

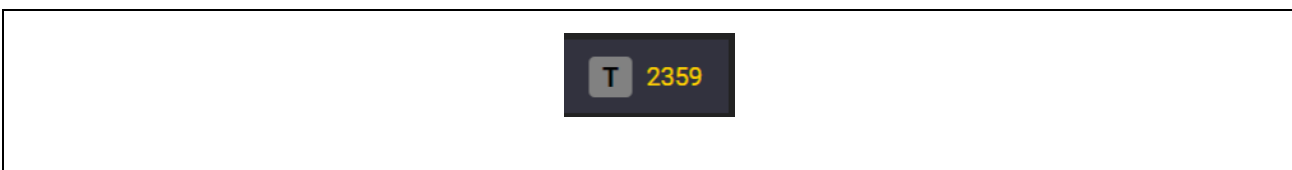


Figure 3 - Displaying of TOBT with restrictive CDM messages

3.6.5 TOBT insertion can also be performed through the SBGR AODB (AMS) platform. However, alerts and validation messages will not be provided through this platform, being restricted to the ACISP platform.

3.7 TOBT CHANGES BEFORE CONFIRMATION

3.7.1 Until the TOBT confirmation time, the user can change this time as many times as necessary.

3.7.2 Any time the aircraft operator perceives the impossibility of complying with the TOBT, it must correct the proposed time.

3.7.3 Any insertion of a new TOBT will only be accepted at least 30 (thirty) minutes before the proposed time.

3.8 TOBT CONFIRMATION

3.8.1 The TOBT, previously entered by the AO/GH, will be confirmed automatically by the system 30 (thirty) minutes before the proposed time.

3.8.2 The system will be displayed according to Figure 4, informing the proximity of the TOBT confirmation time 5 (five) minutes in advance.

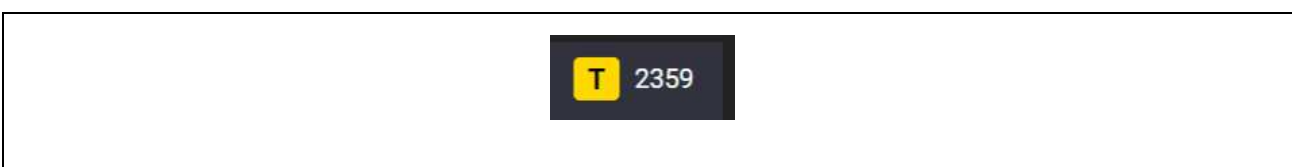


Figure 4 - Displaying of proximity of the TOBT confirmation time

3.8.3 After the TOBT has been confirmed by the system, it will be displayed according to Figure 5, to inform the user that the TOBT has been confirmed.

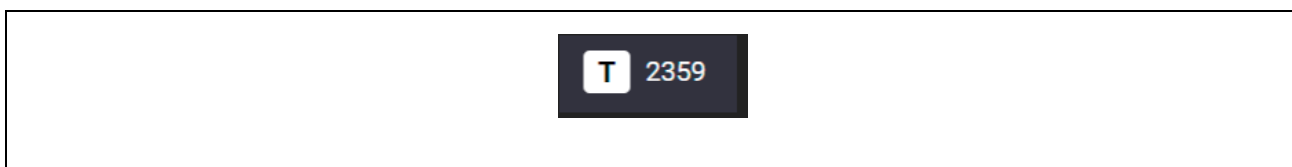


Figure 5 – Displaying of TOBT confirmation

3.8.4 If there is one or more restrictive CDM messages for the flight, the TOBT **will not be confirmed**. In that case, it will be displayed according to Figure 6.

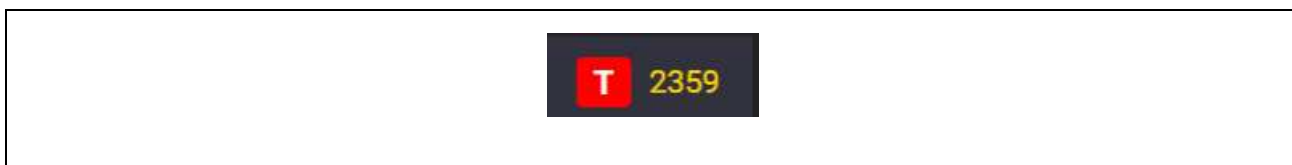


Figure 6 - Displaying of unconfirmed TOBT

In this case (in which the user has not corrected the restrictive situation until the confirmation time), he/she must do so and insert a new TOBT.

3.8.5 If a CHG or DLA message is sent to the AIS Unit changing a (previously valid) TOBT into an invalid one (-15/+45 minutes from the EOBT), an alert message will be displayed on the ACISP platform for the user to correct this and the TOBT will not be confirmed.

3.9 TSAT ISSUE

3.9.1 After confirmation of the TOBT, the Pre-Departure Sequencer (PDS) will issue the TSAT according to the established prioritization criteria. This time will be displayed in the TSAT column of the ACISP platform, as indicated in figure 7.

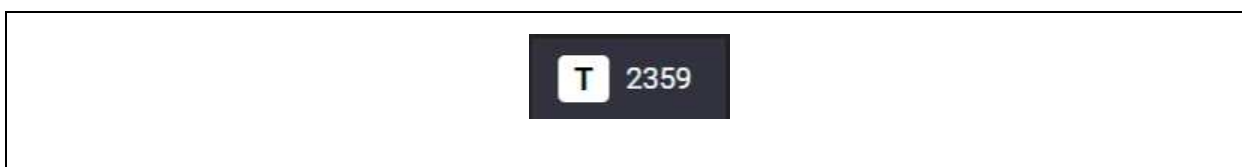


Figure 7 – Displaying of TSAT issuance

3.9.2 If the TSAT is not issued within 5 (five) minutes after confirmation of the TOBT, the user must contact the GRU CCO.

3.9.3 The aerodrome's ATC Unit has the autonomy to change the TSAT issued by the PDS, in order to make specific adjustments to optimize traffic.

3.9.4 If a CTOT time is established by the ATFM Unit, the platform will present a TSAT immediately, regardless of the TOBT confirmation time. In this case, if a TOBT is inserted later with a proposed time after the already established TSAT, it will be changed to a new TSAT and the CTOT measure will be removed.

3.10 TOBT CHANGES AFTER TSAT ISSUANCE

3.10.1 If the operator, after receiving the TSAT, realizes the impossibility of complying with the TOBT and wants to adjust its schedule, it can do so without prejudice to the TSAT, as long as the proposed TOBT time is earlier than the TSAT already issued.

3.10.2 Any insertion of a new TOBT will only be accepted at least 30 (thirty) minutes before the proposed time.

3.10.3 If the change occurs for a new TOBT after the TSAT already issued, the system will allocate a new TSAT according to the availability of the aerodrome.

3.10.4 Changes to the TOBT to times later than the TSAT, with the consequent loss thereof, will have their priority reduced for the purposes of traffic sequencing, so as not to affect the later aircraft that are complying with their respective TSAT.

3.11 TTOT

3.11.1 After entering the TOBT, the target take off time will be displayed to optimize the use of the aerodrome (TTOT). When issuing the TSAT, the TTOT will be updated.

3.11.2 This time is a reference to be pursued, but it has no priority over the ground operations coordination carried out as needed by ATC Unit.

3.12 FLIGHTS WITH CTOT

3.12.1 A flight with CTOT will be handled by the system to comply with the take off window allocated by the ATFM Unit (NO).

3.12.2 If a CTOT time is established by NO, the platform will display a TSAT immediately, regardless of the TOBT confirmation time.

3.12.3 3.12.3 The NO **will seek** to issue the CTOT with a minimum advance of 2 (two) hours from the flight plan EOBT.

3.13 ACTUAL START BOARDING TIME (ASBT)

3.13.1 For scheduled (S) and non-scheduled (N) aviation flights, the AO/GH must enter the start boarding time, which can be done both by the aerodrome's AODB system and by the ACISP platform itself.

3.14 ACTUAL START UP REQUEST TIME (ASRT)

3.14.1 The aircraft must be ready for start up and/or push back at the time informed by the AO/GH and **keep watch** for the GND position (TOBT).

3.14.2 The pilot **shall** request, via phone and at the established frequency, the engine start up within the **TSAT +/- 5 minutes** period.

3.14.3 If the request for start up and/or push back does not occur within 5 minutes after TSAT, it will be **canceled** and start up approval will not be issued by the ATC Unit. In this case, it will be necessary for the AO/GH to insert a new TOBT to receive a new TSAT.

3.15 ACTUAL START UP APPROVAL TIME (ASAT)

3.15.1 The control tower will seek to issue approval for engines start up within the TSAT +/- 5 minutes window, subject to the necessary traffic coordination.

3.16 ENGINES START UP

3.16.1 The engines start up and/or **push back** (AOBT) **shall** be initiated within 5 (five) minutes after approval (ASAT).

3.16.2 If the engines start up and/or push back (AOBT) is not started within 5 (five) minutes after approval, the flight will be subject to the cancellation of its TSAT by the ATC Unit, according to the legislation in force.

3.16.3 If after push back and/or start up, or during taxi-out, there is a need for the aircraft to return to the parking position, the TSAT and TOBT will be cancelled automatically. In this case, the AO/GH shall enter a new TOBT on the ACISP platform (there will be no restriction of the 30 (thirty) minutes in advance rule).

3.17 CDM ALERTS AND MESSAGES

3.17.1 CDM alerts and messages will be displayed on the ACISP platform, on the “Timeline” tab and on the “Alerts” tab, for user's situational awareness.

3.17.2 The purpose of alerts and messages from the ACISP platform is to guide those responsible for resolving the pending issues that may cause TOBT invalidation, at confirmation time.

3.17.3 In cases where there are divergences between the flight plan x airport slot data, as mentioned in item 3.3.1, the ACISP platform will display a restrictive message.

3.17.4 Restrictive messages will be displayed on the platform in red, while alert messages will be displayed in yellow, according to Figures 8 and 9.



Figure 8 – Displaying of restrictive messages

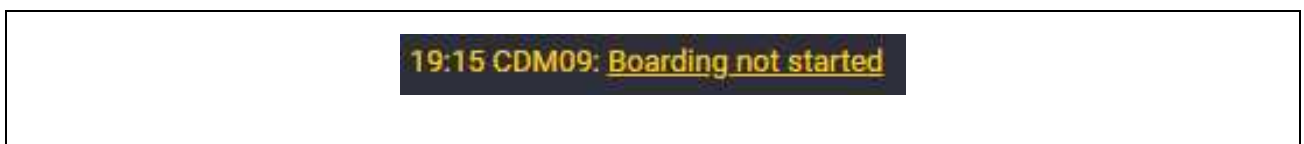


Figure 9 - Displaying of alert messages

3.17.5 If there is one or more restrictive messages for a flight at the time of TOBT confirmation, there will be no TSAT confirmation/allocation.

~~3.17.5~~3.17.6 The restrictive CDM messages are:

- a) CDM01: No Airport Slot Available, or slot already correlated;
- b) CDM02: SOBT vs. EOBT discrepancy;
- c) CDM03: Aircraft Type discrepancy;
- d) CDM04: Aircraft Registration discrepancy;
- e) CDM05: First Destination discrepancy;
- f) CDM08: EOBT Compliance Alert; and
- g) CDM13: No ATC Flight Plan Available.

~~3.17.6~~3.17.7 In the case of restrictive messages, the AO/GH must correct the condition up to 30 (thirty) minutes before the TOBT so that it can be confirmed. If the correction requires coordination with the airport administrator, contact should be made with the GRU CCO.

3.18 A-CDM EXCEPTIONS

3.18.1 Aircraft operating at the SBGR aerodrome will be subject to the A-CDM rules of procedures contained in this AIC, with the exception of:

- a) Rotorcraft with flight plan under visual flight rules (V or Z);
- b) Aircraft with VOCOM flight plan;
- c) Aircraft in Aerospace Defense mission;
- d) Aircraft in military operation (war or internal security mission);
- e) Aircraft in SAR operation; and
- f) Aircraft carrying the President of the Republic.

3.18.2 In the cases provided as an exception to the A-CDM procedures, the aircraft operator (AO) and the ATC Unit must disregard the ACISP platform and carry out the procedures in accordance with the air traffic rules in force.

3.19 CONTINGENCIES

3.19.1 The A-CDM operating condition at the SBGR aerodrome will be informed via the current ATIS message.

3.19.2 If there is an interruption of the A-CDM procedures greater than 60 (sixty) minutes, this condition will also be informed through NOTAM.

3.19.3 If the message “A-CDM NOT AVAILABLE” is displayed on the ACISP platform, the A-CDM procedures will be suspended. In that case, the period in which the flights will be released under the A-CDM rules will be informed. The procedures for the aerodrome will be those provided for in current legislation.

3.19.4 If the user is unable to access the ACISP platform or perceives any type of discrepancy related to the system, he/she should contact the aerodrome's A-CDM support.

4 FINAL PROVISIONS

4.1 The A-CDM operation is determined by the GRU CCO, which is in charge of coordinating it with the other SISCEAB Units regarding the issuance of NOTAM, updating ATIS and other user messages.

4.2 Contacts:

- a) A-CDM support: (011) 2445-3411; and
- b) GRU CCO: (011) 2445-3411/supervisores.cco@gru.com.br.

4.3 Criticisms and/or suggestions are welcome and should be sent via Contact Us - SAC-DECEA, on the Internet, at www.decea.gov.br, or at Intraer, at www.decea.intraer.

4.4 For more information on A-CDM operation, concept and training at SBGR, visit www.acdm.com.br.

4.5 Unforeseen cases will be resolved by the Head of the DECEA Subdepartment of Operations.