Transport Canada Transports Canada

Advisory Circular

Subject:	**SA CAT II: Special Authorization/Specific Approval and Guidance**		
Issuing Office:	Civil Aviation, Standards	Document No.:	AC 700-053
File Classification No.:	Z 5000-34	Issue No.:	02
RDIMS No.:	19438820-V19	Effective Date:	2023-08-11

Table of contents

1.0 Introduction

(1) Subject to paragraph (3), this Advisory Circular (AC) is provided for information and guidance purposes. It describes an example of an acceptable means, but not the only means, of demonstrating compliance with regulations and standards. This AC on its own does not change, create, amend or permit deviations from regulatory requirements, nor does it establish minimum standards.

(2) Operators are expected to follow the means of compliance described in this AC in all respects, unless the Minister approves an acceptable alternate means of compliance.

(3) The conditions of the associated Special Authorization/Specific Approval (SA) appear in Appendix A of this AC:

(a) For air operators, and foreign air operators, the conditions published in Appendix A of this AC constitute part of the Air Operator Certificate (AOC). As such, compliance with these conditions is mandatory pursuant to Subsection 701.02(1), Section 704.02, or Section 705.02 of the *Canadian Aviation Regulations* (CARs) (as applicable); and

(b) For private operators, the conditions published in Appendix A of this AC constitute part of the Private Operator Registration Document (PORD). As such, compliance with these conditions is mandatory pursuant to Subsection 604.74(2) of the CARs.

1.1 Purpose

(1) The purpose of this AC is to provide Canadian air operators, foreign air operators and private operators with information pertaining to the Special Authorization/Specific Approval (SA) to conduct SA Category (CAT) II approaches. This SA is issued by Transport Canada Civil Aviation (TCCA) to private operators holding a PORD issued under Subpart 604, foreign air operators holding a Foreign Air Operator Certificate (FAOC) issued under Subpart 701 or air operators holding an AOC issued under Subparts 704 and 705 of the CARs.

(2) This AC also serves as the basis for air operators, foreign air operators or private operators to obtain an SA CAT II authorization, approval or operations specification from a foreign civil aviation authority, such as the United States Federal Aviation Administration (FAA).

1.2 Applicability

(1) This AC is applicable to:

(a) Canadian air operators holding an AOC issued under Subparts 704 and 705 of the CARs, a PORD issued under Subpart 604 of the CARs, or foreign air operators holding a FAOC issued under Subpart 701 of the CARs;

Note: where this document refers to “operators”, this term includes private operators, foreign air operators and air operators.

(b) pilots, flight dispatchers, flight followers and other operations personnel employed by the operators listed above;

(c) TCCA inspectors with certification and safety oversight responsibilities; and

(d) individuals and organizations that exercise privileges granted to them under an External Ministerial Delegation of Authority.

(2) All flight operations personnel should be aware of the SA CAT II requirements and should understand how these requirements compare with basic Category II or Category III ILS special authorization requirements, as detailed in Transport Canada Publication (TP) 1490 — Manual of All Weather Operations (Categories II and III).

(3) Operators are encouraged to utilize this AC to assist them in reviewing this topic and to determine the applicability of its contents to their specific aircraft types and operating conditions.

(4) This information is also provided to the aviation industry at large for information and guidance purposes.

1.3 Description of changes

(1) Administrative changes made to the AC in section (1), (2), (3), (4), Appendix A and Appendix B to enable use of the SA for the purposes of obtaining a foreign operations specification or Specific Approval for SA CAT II. These changes include:

- (a) additional paragraph (2) in section 1.1 including the use of the SA to obtain a foreign operations specification in the purpose.
- (b) the previous table at 2.1(2) was removed.
- (c) The previous definition of Special Authorization(s) in section 2.3 (1) has been split into 2 definitions for Special authorization and Specific approval, and one previous definition was removed.
- (d) additional paragraph (3) in section 4 specifying an acceptable means of compliance with the conditions listed in Appendix A for SA CAT II operations in foreign jurisdictions.
- (e) change to conditions of Appendix A specifically referencing NAV CANADA. These conditions now reference Air Navigation Service Providers, to allow for SA CAT II operations in foreign jurisdictions.
- (f) additional guidance provided in Appendix B for operations in foreign jurisdictions and acceptable means of compliance with the conditions in Appendix A.

(2) Additional specification was added to the equipment requirements for this operation, in-line with the requirements listed in FAA AC 120-118. This includes the specification that the HGS used for this operation must be certified for Category III operations.

2.0 References and requirements

2.1 Reference documents

(1) It is intended that the following reference materials be used in conjunction with this document:

- (a) *Aeronautics Act* (R.S., 1985, c. A-2)
- (b) Subpart 604 of the *Canadian Aviation Regulations* (CARs) — Private Operator Passenger Transportation
- (c) Subpart 701 of the CARs — Foreign Operations
- (d) Subpart 704 of the CARs — Commuter Operations
- (e) Subpart 705 of the CARs — Airline Operations
- (f) Standard 724 of the *Commercial Air Services Standards* (CASS) — Commuter Operations
- (g) Standard 725 of the CASS — Airline Operations
- (h) Transport Canada Publication (TP) 308 — Criteria for the Development of Instrument Procedures

(i) TP 312, 5th Edition, 2015-09-15 — Aerodrome Standards and Recommended Practices - Land Aerodromes

(j) TP 1490, Edition 04, dated June 1, 2011 — Manual of All Weather Operations (Categories II and III)

(k) Federal Aviation Administration (FAA) Order 8400.13F with Change 1; Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations; Effective date August 18, 2022

(l) Federal Aviation Administration (FAA) AC 120-118 - Criteria for Approval/Authorization of All Weather Operations (AWO) for Takeoff, Landing, and Rollout

(m) International Civil Aviation Organization (ICAO) DOC 9365 — Manual of All-Weather Operations

(n) ICAO DOC 9830 — Advanced Surface Movement Guidance and Control System (A-SMGCS) Manual

(o) Canada Air Pilot (CAP)

(p) Canada Flight Supplement (CFS)

2.2 Cancelled documents

(1) Not applicable.

(2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and abbreviations

(1) The following **definitions** are used in this document:

(a) **Autoland System** — The airborne equipment which provides automatic control of the aeroplane during the approach and landing.

(b) **Category I operation (CAT I)** — A precision instrument approach and landing with a decision height not lower than 200 feet (60 m) and with either a visibility of not less than ½ statute mile (800 m) or a runway visual range of not less than 2600 feet (800 m).

(c) **Category II operation (CAT II)** — A precision instrument approach and landing with:

(i) a decision height lower than 200 feet (60 m) but not lower than 100 feet (30 m);

(ii) a runway visual range (RVR) not less than 1,200 feet (350 m) at RVR A; and

(iii) a runway visual range not less than 600 feet (175 m) at RVR B.

(d) **Category III (A) operation (CAT III (A))** — A precision instrument approach and landing with:

(i) a decision height lower than 100 feet (30 m), or no decision height: and

(ii) a runway visual range not less than 600 feet (175 m) at each of RVR A, RVR B and RVR C.

(e) **Category III (B) operation (CAT III (B))** — A precision instrument approach and landing with:

(i) a decision height lower than 50 feet (15 m), or no decision height: and

(ii) a runway visual range less than 600 feet (175 m) but not less than 150 feet (50 m) at each of RVR A, RVR B and RVR C.

(f) **Category III (C) operation (CAT III (C))** — A precision instrument approach and landing with no decision height and no runway visual range limitation.

(g) **Decision Altitude or Decision height (DA/DH)** — Means an altitude or height specified in the Canada Air Pilot or the route and approach inventory at which a missed approach must be initiated during a precision approach or an approach procedure with vertical guidance if the required visual reference necessary to continue the approach to land has not been established.

(h) **Head Up Display (HUD)** — An airplane system which provides head-up guidance to the pilot during flight and may receive inputs from an airborne navigation system or flight guidance system.

(i) **Heads Up Guidance System (HGS)** — An airborne instrument system which presents sufficient information and guidance in a specific area of the aircraft windshield, superimposed for a conformal view with the external visual scene, which permits the pilot to maneuver the aircraft manually by reference to that information and guidance alone to a level of performance and reliability that is acceptable for the category of operation concerned.

(j) **Required Visual Reference** —In respect of an aircraft on an approach to a runway, means that portion of the approach area of the runway or those visual aids that, when viewed by the pilot of the aircraft, enable the pilot to make an assessment of the aircraft position and rate of change of position, in order to continue the approach and complete a landing.

(k) **RVR or runway visual range** — Means the range over which the pilot of an aircraft on the centerline of a runway can expect to see the runway surface markings or the lights delineating the runway or identifying that centerline.

(l) **Special Authorizations (SA**) — Are authorizations issued by the Minister under Subpart 604 of the CARs that permit the carrying out of an activity in respect of which the Minister has established requirements. SAs are included as part of the operations specifications.

(m) **Specific Approval (SA)** — Are authorizations issued by the Minister under part VII of the CARs that permit the carrying out of an activity in respect of which the Minister has established requirements. SAs are included as part of the operations specifications.

(2) The following **abbreviations** are used in this document:

(a) **AC:** Advisory Circular

(b) **AFM**: Aircraft Flight Manual

(c) **ALSF:** Approach Lighting System with sequenced Flashing lights

(d) **ANSP:** Air Navigation Services Provider (for foreign State operations)

(e) **AOC:** Air Operator Certificate

(f) **A-SMGCS:** Advanced Surface Movement Guidance and Control System

(g) **ATC:** Air Traffic Control

(h) **ATS:** Air Traffic Service

(i) **AWM**: Airworthiness Manual

(j) **CAA**: Civil Aviation Authority

(k) **CARs**: *Canadian Aviation Regulations*

(l) **CASS**: *Commercial Air Service Standards*

(m)	**CAT:**	Category
(n)	**COM**:	Company Operations Manual
(o)	**DA:**	Decision Altitude
(p)	**DH**:	Decision Height
(q)	**FAA:**	Federal Aviation Administration (United States)
(r)	**FAOC:**	Foreign Air Operator Certificate
(s)	**FAR:**	*Federal Aviation Regulations* (United States)
(t)	**FSIMS:**	Flight Standards Information Management System (FAA website)
(u)	**GP:**	Glidepath
(v)	**HGS:**	Heads Up Guidance System
(w)	**HIRL:**	High Intensity Runway Lights
(x)	**HUD:**	Heads Up Display
(y)	**IAP:**	Instrument Approach Procedure
(z)	**ICAO:**	International Civil Aviation Organization
(aa)	**ILS:**	Instrument Landing System
(bb)	**IM:**	Inner Marker
(cc)	**LOC:**	Localizer
(dd)	**LVOP:**	Low Visibility Operations Plan
(ee)	**MALSR:**	Medium intensity Approach Lighting System with Runway alignment indicator lights
(ff)	**MTBO:**	Mean Time Between Overhaul
(gg)	**OFZ:**	Obstacle Free Zone
(hh)	**PM:**	Pilot Monitoring
(ii)	**PF:**	Pilot Flying
(jj)	**PORD:**	Private Operator Registration Document
(kk)	**RCL:**	Runway Centre Line
(ll)	**RVOP:**	Reduced Visibility Operations Plan
(mm)	**RVR:**	Runway Visual Range
(nn)	**SA:**	Special Authorization/Specific Approval
(oo)	**SMGCS:**	Surface Movement Guidance and Control System
(pp)	**SOPs:**	Standard Operating Procedures
(qq)	**SSALR:**	Simplified Short Approach Lighting system with Runway alignment Indicator lights
(rr)	**TCCA:**	Transport Canada Civil Aviation
(ss)	**TCH:**	Threshold Crossing Height
(tt)	**TDZ:**	Touchdown Zone
(uu)	**TP:**	Transport Canada Publication

3.0 Background

3.1 General

(1) NAV CANADA has installed Instrument Landing Systems (ILS) for CAT I ILS approaches that have the performance capabilities of CAT II and CAT III ILS.

(2) However, CAT I ILS approaches may not have the ground equipment and/or lighting systems necessary to qualify them to CAT II or CAT III capabilities.

(3) SA CAT II approaches are CAT I ILS approaches that, under certain conditions, can safely permit a Decision Height (DH) of 100 feet and Runway Visual Range (RVR) values of 1200 feet, similar to a conventional CAT II instrument approach. Operators may be authorized to fly SA CAT II approaches if they meet the conditions of Appendix A of this AC.

(4) SA CAT II approaches are distinct procedures and must be flown in accordance with dedicated SA CAT II Instrument approach procedures (IAP).

(5) A major difference between an SA CAT II and a conventional Category II instrument approach is that the SA CAT II approach may only have approach and/or runway lighting systems intended for CAT I approaches.

(6) The ILS performance is capable of allowing an aircraft to reach the SA CAT II minima of 100 feet DH and 1200 RVR. Appropriate flight guidance is required for the aircraft to reach the SA CAT II minima, to allow the flight crew to acquire the Required Visual Reference to continue the approach to a landing.

(7) Because of the reduced lighting systems, SA CAT II approaches must be flown automatically with an autoland system for aircraft that are so equipped. For aircraft not equipped with autoland systems SA CAT II approaches must be flown manually using a Category III certified head-up guidance system (HGS) system providing guidance to touchdown in accordance with the applicable AFM or AFM supplement.

Note: Approaches flown using an HGS are normally flown without coupling to the autopilot by design, in accordance with the AFM.

(8) All required conditions for the issuance of special authorization/specific approval SA CAT II are provided in Appendix A of this AC. The conditions in Appendix A require other SAs as a prerequisite, depending on whether the SA CAT II approaches are to be flown automatically using an autoland system or flown manually using a category III certified HGS, as follows:

(a) Either of the following SAs are required for SA CAT II approaches flown using an autoland system:

(i) CATEGORY II – INSTRUMENT APPROACHES; or

(ii) CATEGORY III – INSTRUMENT APPROACHES.

(b) For aircraft which are not equipped with an Autoland system, the SA for **CATEGORY I-II-III – APPROACH OPERATIONS USING A HEAD UP DISPLAY (HUD) - AEROPLANE** is required for manually flown approaches using an HGS.

3.2 Application and structure of this Advisory Circular

(1) This AC provides the conditions and associated guidance applicable to the SA for SA CAT II.

(2) To accomplish the above stated objectives, the AC is structured in the following sections:

(a) **Main Body**: Provides background information and general guidance.

(b) **Appendix A**: Stipulates the conditions which operators must meet when issued the subject SA. Compliance with these conditions is mandatory for operators and pilots conducting SA CAT II approaches.

(c) **Appendix B**: Provides specific guidance respecting the conditions for the subject SA (Appendix A). To facilitate cross-reference, the guidance in Appendix B utilizes the same numbering as the conditions in Appendix A of this AC.

(d) **Appendix C**: Features a compliance checklist for the conditions of the subject SA (Appendix A). This compliance checklist has been developed to assist operators to confirm that they are in compliance with the conditions of the SA. It also serves as an aid to Transport Canada Civil Aviation (TCCA) personnel for certification and safety oversight purposes.

(e) **Appendix D**: Provides a list of the provisions in the *Canadian Aviation Regulations* (CARs) and *Commercial Air Service Standards* (CASS) that are applicable to operators conducting SA CAT II approaches.

4.0 TCCA approval

(1) A Canadian operator should apply to their Principal Operations Inspector to request the SA for SA CAT II approaches**.**

(2) NAV CANADA can provide a letter for each published SA CAT II approach attesting that the conditions in Appendix A Part 3 have been satisfied.

(3) In the case of operations in other jurisdictions, the attestation letter referred to in paragraph (2) above is not required if instrument approach procedure, lighting, aerodrome and equipment requirements are established through regulation or standards. For example, FAA Order 8400.13F contains the details concerning requirements for design of SA CAT II procedures. Procedure design should comply with the applicable instrument flight procedure standard (FAA TERPS or ICAO PANS-OPS).

5.0 Future disposition

(1) TCCA is committed to maintaining a viable civil aviation transportation system, while not compromising safety. This AC will remain in effect for information purposes until further notice.

6.0 Information management

(1) Not applicable.

7.0 Document history

(1) Advisory Circular (AC) 700-053, **Issue 01**, RDIMS 14569690 (E), 14909752 (F), dated 2019-10-15 — SA CAT II: Special Authorization and Guidance.

8.0 Contact us

For more information, please contact:

Chief, Commercial Flight Standards (AARTF)

E-mail: AARTFInfo-InfoAARTF@tc.gc.ca

We invite suggestions for amendment to this document. Submit your comments to:
Standards Branch Documentation Services

E-mail: AARTDocServices-ServicesdocAART@tc.gc.ca

Original signed by Andrew Larsen for

Stacey Mason
Director, Standards
Civil Aviation

Appendix A — Conditions for SA CAT II

Authority

The Special Authorization/Specific Approval SA CAT II is issued pursuant to section 604.51 and subparagraphs 704.08(g)(i), 704.08(g)(xi), 705.08(g)(i) and 705.08(g)(xi) of the *Canadian Aviation Regulations* (CARs). It authorizes an operator to conduct Category II Instrument Landing System (ILS) approaches with a Decision Height (DH) as low as 100 feet and Runway Visual Range (RVR) as low as 1200 feet when using an aeroplane equipped with an approved Automatic Landing (Autoland) system or Heads Up Guidance System (HGS), at some Category I certified aerodrome facilities.

Conditions

This authority is granted subject to the following conditions:

1.0 Operator requirements

1.1 Prerequisite SAs

1.1.1 The conduct of Special Authorization/Specific Approval SA CAT II instrument approaches using an aircraft equipped with a type certified Automatic Landing System requires:

(a) Special Authorization/Specific Approval **CATEGORY II – INSTRUMENT APPROACHES**; or

(b) Special Authorization/Specific Approval **CATEGORY III – INSTRUMENT APPROACHES**.

1.1.2 The conduct of SA CAT II instrument approaches using an aircraft equipped with a type-certified Heads Up Guidance System (HGS) requires Special Authorization/Specific Approval **CATEGORY I-II-III APPROACH OPERATIONS USING A HEAD UP DISPLAY (HUD) - AEROPLANES**.

1.2 Documentation

1.2.1 The operator's Company Operations Manual (COM) will address the conduct of SA CAT II approaches. The contents of the COM will include, but is not limited to:

(a) the conditions as stipulated in Appendix A of this Advisory Circular (AC) and associated guidance;

(b) any safety information respecting SA CAT II operations which the operator deems appropriate.

1.3 Operational procedures

1.3.1 SA CAT II approaches and landings must be flown:

(a) automatically using a type-certified Automatic Landing System; or

(b) manually using a type-certified HGS certified for use during Category III operations.

1.3.2 The operator shall develop and use Standard Operating Procedures (SOPs) applicable to SA CAT II approaches.

1.3.3 The operator shall establish the required visual references necessary to descend below the decision height and to complete a safe landing and roll out.

1.4 Ground and flight training (initial and recurrent)

1.4.1 The operator shall have an approved initial and recurrent ground and flight training program to qualify pilots to conduct SA CAT II approaches.

1.4.2 The operator's approved initial and recurrent ground and flight training program shall include, but is not limited to:

(a) the conditions as stipulated in Appendix A of this AC and associated guidance;

(b) differences from conventional Category II instrument approaches:

(i) Approach and runway lighting systems;

(ii) Aerodrome facilities and operating procedures;

(iii) Required Visual References for the Pilot Flying (PF) to continue the approach to landing;

(iv) Appropriate use of automation;

(v) Pilot Monitoring (PM) duties; and

(vi) Required interior and exterior aircraft lighting; and

(c) any other safety information respecting SA CAT II approaches the operator deems appropriate.

2.0 Aircraft requirements

2.1. Certification standards

2.2 The aeroplane utilized to conduct SA CAT II approaches must be certified to conduct Category II or Category III automatic landings, or Category III HGS landings, as applicable, and in accordance with:

(a) Chapter 523 of the *Airworthiness Manual* (AWM) — Commuter Category Aeroplanes;

(b) Chapter 525 of the AWM — Transport Category Aeroplanes;

(c) Federal Aviation Administration (FAA), *Federal Aviation Regulations* (FAR) 23, Airworthiness Standards: Commuter Category Airplanes; or

(d) FAA FAR 25 Airworthiness Standards: Transport Category Airplanes.

3.0 Aerodrome requirements

3.1 Reduced visibility operations plan

3.1.1 The airport must be operated in accordance with a Reduced Visibility Operations Plan (RVOP), a Low Visibility Operations Plan (LVOP) or foreign equivalent (as applicable), including:

(a) positive aircraft and vehicle control of ground operations;

(b) elements of a Surface Movement Guidance and Control System (SMGCS);

(c) criteria for minimum runway snow clearance widths and windrow height; and

(d) training requirements for airside and Air Traffic Service (ATS) personnel.

3.2 Air traffic services

3.2.1 SA CAT II operations require an operational Air Traffic Control (ATC) tower.

3.3 Runway requirements

3.3.1 The runway must have a declared landing distance of 6000 feet or greater.

3.3.2 Runways must have or be qualified for an ILS with a DH of 200 feet.

3.3.3 Runways must be equipped with High Intensity Runway Lights (HIRL), runway guard lights, and at least one of the following ancillary components:

(a) Simplified Short Approach Lighting system with Runway alignment indicator lights (SSALR), or

(b) Medium intensity Approach Lighting System with Runway alignment indicator lights (MALSR) with threshold bar that is separate from runway end lights.

3.3.4 SA CAT II operations at or above RVR 1600 require a Touch Down Zone (TDZ) sensor of an RVR reporting system.

3.3.5 SA CAT II operations between RVR 1600 and RVR 1200 require not less than 2 sensors of an RVR reporting system, and one of the required sensors must be for the TDZ.

3.3.6 SA CAT II operations with only one RVR sensor are restricted to RVR 1600 or above.

3.3.7 A midpoint RVR sensor is required in addition to the touchdown and rollout sensors for SA CAT II operations below RVR 1600 when the runway is in excess of 8000 feet in length.

3.3.8 Runway lighting systems must have standby power with a one-second transfer.

3.3.9 The touchdown RVR system must have standby power with a one-second transfer in the event of a primary power source outage.

3.4 Critical area requirements

3.4.1 The ILS critical areas must be protected to provide not less than performance classification II/D/2.

3.5 ILS requirements

3.5.1 Prior to publishing any SA CAT II instrument approach procedure, the Air Navigation Service Provider (ANSP) must ensure that:

(a) ILS monitors are set to CAT II limits;

(b) dual channel ILS systems are used;

(c) the Localizer (LOC), Glidepath (GP), and Inner Marker (IM) (if operationally required due to terrain) operational status (e.g., on/off) are remotely monitored by the controlling ATC unit;

(d) the LOC, GP, and IM (if operationally required) have an approved backup power source, which provides an uninterrupted power supply in the event of a primary power source outage;

(e) the LOC, GP, and IM (if operationally required) electrical power requirements must be in accordance with TP 312 for operations down to RVR 1200;

(f) the LOC final course alignment is coincident with the Runway Center Line (RCL);

(g) the GP angle is 3.0 degrees; and

(h) the Threshold Crossing Height (TCH) is between 50 and 60 feet.

3.6 Obstruction requirements

3.6.1 Prior to publishing any SA CAT II instrument approach procedure, the Air Navigation Services Provider (ANSP) must ensure that:

(a) the Obstacle Free Zone (OFZ) meets the CAT II/III OFZ standards described in TP 312 or foreign equivalent; and

(b) obstructions do not penetrate the approach light plane in accordance with TP 312, or foreign equivalent.

3.7 Instrument approach requirements

3.7.1 Prior to publishing any SA CAT II instrument approach procedure, the ANSP must ensure that:

(a) runway and pre-threshold terrain is accounted for; and

(b) the missed approach segment meets the current TP 308 CAT II/III development standard or foreign equivalent.

3.7.2 The Instrument Approach Procedure (IAP) chart must include the following operational notes:

(a) PRIOR AUTH REQUIRED FROM Transport Canada;

(b) USE OF AUTOLAND OR HUD REQUIRED TO TOUCHDOWN.

Note: Language for condition 3.7.2 above may differ for instrument approach procedures from other jurisdictions.

3.7.3 The IAP chart must have the following operational note if the tower does not provide continuous service:

(a) PROCEDURE NOT AUTHORIZED WHEN TOWER CLOSED.

3.7.4 The ANSP must adjust and maintain the facility to a CAT II Performance Classification standard and ensure that it meets at least Level 2 integrity, continuity, and Mean Time Between Overhaul (MTBO) requirements.

3.7.5 The approach must meet CAT II flight inspection tolerances including the LOC CAT II structure to Point D.

3.7.6 This procedure must be published as a distinct SA CAT II instrument approach procedure.

Appendix B — Specific guidance respecting the conditions of the Special Authorization/Specific Approval SA CAT II

B.1 Overview

(1) The matrix below provides specific guidance corresponding to the conditions specified for the Special Authorization/Specific Approval SA CAT II which appears in Appendix A of this AC.

Condition in Appendix A (Paragraph no.)	Guidance information
1. Operator requirements	
1.1 Prerequisite SAs	
1.1.1 The conduct of Special Authorization/Specific Approval SA CAT II instrument approaches using an aircraft equipped with a type certified Automatic Landing System requires: (a) Special Authorization CATEGORY II – INSTRUMENT APPROACHES; or (b) Special Authorization CATEGORY III – INSTRUMENT APPROACHES.	Either of the SAs listed are a prerequisite requirement for the conduct of SA CAT II instrument approaches when using an aircraft equipped with a type certified Automatic Landing system capable of conducting automatic approaches and landings. All conditions of the applicable SA must be met.
1.1.2 The conduct of SA CAT II instrument approaches using an aircraft equipped with a type-certified Head-Up Guidance System (HGS) requires Special Authorization/Specific Approval **CATEGORY I-II-III – APPROACH OPERATIONS USING A HEAD UP DISPLAY (HUD) - AEROPLANES**.	This SA is a prerequisite requirement for the conduct of SA CAT II instrument approaches when using an aircraft equipped with a type-certified Head-Up Guidance System (HGS) capable of providing guidance to permit manually flown approaches and landings in low visibility weather conditions. All conditions of this SA must be met.
1.2 Documentation	
1.2.1 The operator's Company Operations Manual (COM) will address the conduct of SA CAT II approaches. The contents of the COM will include, but is not limited to: (a) the conditions as stipulated in Appendix A of this advisory circular (AC) and associated guidance; (b) any safety information respecting SA CAT II operations which the operator deems appropriate.	Reserved.

1.3 Operational procedures	
1.3.1 SA CAT II approaches and landings must be flown: (a) automatically using a type-certified Automatic Landing System; or (b) manually using a type-certified HGS certified for use during Category III operations.	Because of the reduced lighting systems, SA CAT II approaches must be flown either automatically with an operational autoland system or flown manually using an HGS system providing guidance to touchdown. • SA CAT II approaches using an autoland system must be automatically flown to touchdown. • SA CAT II approaches using an HGS must be flown manually to touchdown using the guidance provided by the HGS.
1.3.2 The operator shall develop and use Standard Operating Procedures (SOPs) applicable to SA CAT II approaches.	Reserved.
1.3.3 The operator shall establish the required visual references necessary to descend below the decision height and to complete a safe landing and roll out.	Reserved.
1.4 Ground and flight training (initial and recurrent)	
1.4.1 The operator shall have an approved initial and recurrent ground and flight training program to qualify pilots to conduct SA CAT II approaches.	Where the operator is SA CAT II approved, the air operator may substitute the SA CAT II approach for the CAT II approach listed in 3.4.1 (c) of the Manual of All Weather Operations (TP1490).
1.4.2 The operator's approved initial and recurrent ground and flight training program shall include, but is not limited to: (a) the conditions as stipulated in Appendix A of this AC and associated guidance; (b) Differences from conventional Category II instrument approaches: (i) Approach and runway lighting systems; (ii) Aerodrome facilities and operating procedures; (iii) Required Visual References for the Pilot Flying (PF) to continue the approach to landing; (iv) Appropriate use of automation;	Ref 1.4.2 (b) The training program must include the differences in approach, runway and aerodrome lighting systems between conventional Category II instrument approach and SA CAT II lighting systems. Ref 1.4.2 (b) (iii) The training must include the required visual references necessary to safely continue the approach to a landing with an emphasis on being prepared to conduct a safe go-around if the required visual references are lost. The training should include the acquisition of runway edge lights to help conduct a safe landing and roll-out. Ref 1.4.2 (b) (v) The Pilot Monitoring (PM) should remain heads down during the approach, landing and roll-out and call-out any deviations. Standard Operating Procedures (SOPs) should

(v) Pilot Monitoring (PM) duties; and (vi) Required interior and exterior aircraft lighting; and (c) any other safety information respecting SA CAT II approaches the operator deems appropriate.	be developed to define PF and PM duties and calls for SA CAT II approaches. Ref 1.4.2 (b) (vi) Recommended use of interior and exterior lighting should include pilot seat position and any adverse use of landing and other exterior lights in low visibility weather conditions.
2. Aircraft requirements	
2.1 Certification standards	
2.1.1 The aeroplane utilized to conduct SA CAT II approaches must be certified to conduct Category II or Category III automatic landings, or Category III HGS landings as applicable, and in accordance with: (a) Chapter 523 of the Airworthiness Manual (AWM)—Commuter Category Aeroplanes; (b) Chapter 525 of the AWM – Transport Category Aeroplanes; (c) Federal Aviation Administration (FAA), Federal Aviation Regulations (FAR) 23, Airworthiness Standards: Commuter Category Airplanes; or (d) FAA FAR 25 Airworthiness Standards: Transport Category Airplanes.	The criteria for certification of automatic landing systems or category III certified HGS can be found in FAA AC 120-28, as amended from time to time. Note: A HUD which has not been certified for use as a guidance system for Category III operations cannot be used to satisfy the requirements of this section.
3. Aerodrome requirements	
3.1 Reduced visibility operations plan	
3.1.1 The airport must be operated in accordance with a Reduced Visibility Operations Plan (RVOP), a Low Visibility Operations Plan (LVOP) or foreign equivalent (as applicable) including: (a) positive aircraft and vehicle control of ground operations; (b) elements of a Surface Movement Guidance and Control System (SMGCS); (c) criteria for minimum runway snow clearance widths and windrow height; and (d) training requirements for airside and Air Traffic Service (ATS) personnel.	Airport concurrence is required and must be obtained prior to the design of any SA CAT II approach procedure. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.2 Air traffic services	
3.2.1 SA CAT II operations require an operational Air Traffic Control tower.	SA CAT II operations require an operational Air Traffic Control (ATC) tower to ensure separation of airborne and ground traffic in low visibility

	conditions, to ensure proper protection of the Localizer (LOC) and Glidepath (GP) critical areas, and to accomplish the required monitoring of ground equipment.
3.3 Runway requirements	
3.3.1 The runway must have a declared landing distance of 6000 feet or greater.	For runways without published declared distances, the declared distances may be assumed to be equal to the physical length of the runway minus any threshold displacement.
3.3.2 Runways must have or be qualified for an ILS with a Decision Height (DH) of 200 feet.	Requests for SA CAT II approaches for a specific runway can be initiated by any operator or organization. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.3.3 Runways must be equipped with High Intensity Runway Lights (HIRL), runway guard lights, and at least one of the following ancillary components: (a) Simplified Short Approach Lighting system with Runway alignment indicator lights (SSALR), or (b) Medium intensity Approach Lighting System with Runway alignment indicator lights (MALSR) (with threshold bar that is separate from runway end lights).	ALSF-1/ALSF-2 are also acceptable. In the event of a failure of TDZ and/or RCL lighting, or a downgrade from an ALSF-1 or ALSF-2 to an SSALR, SA CAT II operations are authorized for continued use if authorized in the operator's COM. (Note: downgrades or failures may be communicated through ATC or by NOTAM)
3.3.4 SA CAT II operations at or above RVR 1600 require a Touch Down Zone (TDZ) sensor of an RVR reporting system.	Reserved.
3.3.5 SA CAT II operations between RVR 1600 and RVR 1200 require not less than 2 sensors of an RVR reporting system, and one of the required sensors must be for the TDZ.	The RVR sensor in the TDZ is referred to as RVR "A" and the other sensor in the mid-field is referred to as RVR "B".
3.3.6 SA CAT II operations with only one RVR sensor are restricted to RVR 1600 or above.	Operations with a single RVR sensor require an RVR "A" sensor (RVR sensor in the TDZ).
3.3.7 A midpoint RVR sensor is required in addition to the touchdown and rollout sensors for CAT II operations below RVR 1600 when the runway is in excess of 8000 feet in length.	The State regulatory authority may approve SA CAT II operations on a runway in excess of 8000 feet with only a TDZ (RVR A) and rollout sensor (RVR B) on a case-by-case basis.
3.3.8 Runway lighting systems must have standby power with a one-second transfer.	Runway lighting systems are to be remotely monitored so that aircraft can be notified immediately if they become inoperative.

	Note: The approach lighting system does not require standby power or remote monitoring. (Reference 3.3.3) Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.3.9 The touchdown RVR system must have standby power with a one-second transfer in the event of a primary power source outage.	Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.4 Critical area requirements	
3.4.1 The ILS critical areas must be protected to provide not less than performance classification II/D/2.	If the approach or approach facility has restrictions, it must be approved by the state regulatory authority on a case-by-case basis. ILS performance standards to Point D and Level 2 are defined by ICAO. A record of ILS Flight Check Performance in Canada is provided by NAV CANADA. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.5 ILS requirements	
3.5.1 Prior to publishing any SA CAT II instrument approach procedure, the Air Navigation Service Provider (ANSP) must ensure that: (a) ILS monitors are set to CAT II limits	Any failures of the approach system and ancillary components, which support SA CAT II operations that would normally downgrade the system, must be acted on in accordance with the procedures contained in TP 1490. A LOC far field monitor is not required. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
(b) Dual channel ILS systems are used	Dual ILS transmitter facilities are required. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
(c) the LOC, GP, and Inner Marker (IM) (if operationally required due to terrain) operational status (e.g., on/off) are remotely monitored by the controlling ATC unit	An IM is not required to support SA CAT II approach and landing operations, unless an RA minimum is not authorized due to terrain, obstacles, or other local requirements. This remote status monitoring is distinct from the remote maintenance monitoring done for the benefit of maintenance personnel, and distinct from the local executive integrity monitor, which automatically shuts down the facility when monitored parameters exceed specified

	tolerances. The remote status monitoring can be implemented by landlines, through-the-air receivers, fiber optics, radio links, etc. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
(d) the LOC, GP, and IM (if operationally required) have an approved backup power source, which provides an uninterrupted power supply in the event of a primary power source outage.	Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
(e) the LOC, GP, and IM (if operationally required) electrical power requirements must be in accordance with TP 312 or equivalent for operations down to RVR 1200	Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
(f) the LOC final course alignment is coincident with the Runway Center Line (RCL).	No localizer offset is permitted.
(g) the GP angle is 3.0 degrees.	GP angles other than 3.0 degrees require approval of the State regulatory authority.
(h) the TCH is between 50 and 60 feet.	The commissioned TCH shall be between 50 and 60 feet with the optimum being 55 feet. Any deviation must meet current TP 308 CAT II/III development standards or must have a formal Flight Standards waiver to TP 308.
3.6 Obstruction requirements	
3.6.1 Prior to publishing any SA CAT II instrument approach procedure, the ANSP must ensure that: (a) the OFZ meets the CAT II/III OFZ standards described in TP312, or foreign equivalent; and (b) obstructions do not penetrate the approach light plane in accordance with TP312, or foreign equivalent.	Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.7 Instrument approach requirements	
3.7.1 Prior to publishing any SA CAT II instrument approach procedure, the ANSP must ensure that: (a) runway and pre-threshold terrain is accounted for; and (b) the missed approach segment meets the current TP 308 CAT II/III development standard or foreign equivalent.	Operational review and approval of a particular aircraft type and site-specific performance regarding “special terrain” airport runways, is necessary by the regulatory authority for SA CAT II minimum approvals because it is predicated on the use of autoland or HGS to touchdown. Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.

3.7.2 The IAP chart must include the following operational notes: (a) PRIOR AUTH REQUIRED FROM TC (b) USE OF AUTOLAND OR HUD REQUIRED TO TOUCHDOWN Note: Language for condition 3.7.2 above may differ for instrument approach procedures from other jurisdictions. In such cases, equivalent language is acceptable.	These procedures are developed in accordance with the standard TP 308 CAT II development criteria.
3.7.3 The IAP chart must have the following operational note if the tower does not provide continuous service: (a) PROCEDURE NOT AUTHORIZED WHEN TOWER CLOSED	Reserved.
3.7.4 The ANSP must adjust and maintain the facility to a CAT II Performance Classification standard and ensure that it meets at least Level 2 integrity, continuity, and MTBO requirements.	Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.7.5 The approach must meet CAT II flight inspection tolerances including the LOC CAT II structure to Point D.	The record of ILS flight check performance for Canada can be found here: https://www.navcanada.ca/en/ils-integrity-flight-inspection-performance.pdf Compliance with this condition can be verified through the attestation referred to in section 4.0 (2) of this AC.
3.7.6 This procedure must be published as a distinct SA CAT II instrument approach procedure.	Reserved.

Appendix C — Compliance checklist

C.1 Overview

(1) The matrix below has been developed to assist operators in ensuring that they are in compliance with the conditions specified for the Special Authorization/Specific Approval for SA CAT II (Appendix A).

(2) This matrix also serves as an aid for Transport Canada Civil Aviation (TCCA) personnel for the purposes of certification and safety oversight.

(3) This matrix provides:

(a) a reference to the specific condition in the SA;

(b) the assessment of compliance (to be made by the operator/TCCA personnel); and

(c) an area to record the details of the operator's means of compliance. (This can include such things as the applicable references in the company operations manual, etc.)

(4) This matrix can be reproduced locally.

Requirement		Compliance (Y/N)	Means of compliance (references / documentation)
1. Operator requirements	**Paragraph 1.1.1** Prerequisite special authorizations/specific approvals		
	Paragraph 1.1.2 Conduct of SA CAT II with a HGS		
	Paragraph 1.2.1 COM contents		
	Paragraph 1.3.1 Automatic or manual systems		

	Paragraph 1.3.2 SOP development		
	Paragraph 1.3.3 Establish required visual references		
	Paragraph 1.4.1 Training program		
	Paragraph 1.4.2 Ground and flight training program inclusions		
2. Aircraft requirements	**Paragraph 2.1.1** Certification Standards		
3. Aerodrome requirements	**Paragraph 3.1.1** Reduced Visibility Operations Plan		
	Paragraph 3.2.1 Operational Air Traffic Control Tower		
	Paragraph 3.3.1 Declared landing distance		

	Paragraph 3.3.2 ILS with a DH of 200 feet		
	Paragraph 3.3.3 Runway lighting		
	Paragraph 3.3.4 RVR TDZ sensor		
	Paragraph 3.3.5 RVR sensors at RVR 1200		
	Paragraph 3.3.6 RVR sensors at RVR 1600		
	Paragraph 3.3.7 Midpoint RVR sensor		
	Paragraph 3.3.8 Standby power for runway lighting		
	Paragraph 3.3.9 Standby power for RVR system		

	Paragraph 3.4.1 ILS critical area protection		
	Paragraph 3.5.1 ANSP ILS requirements		
	Paragraph 3.6.1 ANSP obstruction requirements		
	Paragraph 3.7.1 ANSP terrain and missed approach requirements		
	Paragraph 3.7.2 Instrument approach procedures chart notes – authorization and use of automation		
	Paragraph 3.7.3 Instrument approach procedures chart notes – ATC tower		
	Paragraph 3.7.4 ANSP ILS performance classification		
	Paragraph 3.7.5 Flight inspection tolerances		

	Paragraph 3.7.6 Procedure promulgation		

Appendix D — Applicable regulations

D.1 Overview

(1) Some of *Canadian Aviation Regulations* (CARs) and *Commercial Air Service Standards* (CASS) that are applicable to operators conducting SA CAT II approaches.

Caution: The regulations listed below are not necessarily complete and up to date; and they will not necessarily be updated. Operators and pilots are responsible for compliance with all relevant provisions.

D.2 CARs Part VI, Subpart 4 and Part VII, Subparts 4 and 5

Subject	Provisions in the CARs	Provisions in the CASS
Precision Approaches – CAT II and CAT III	Section 604.51	N/A
Contents of an Air Operator Certificate	Subparagraphs 701.08(g)(i), 701.08(g)(vi), 704.08(g)(i) 704.08(g)(xi), 705.08(g)(i) and 705.08(g)(xi)	Sections 724.08 and 725.08
Company Operations Manual	Sections 704.121 and 705.135	Sections 724.121 and 725.135
Standard Operating Procedures (SOPs)	Sections 704.124 and 705.138	Sections 724.124 and 725.138
Flight Crew Member Qualifications	Sections 704.108 and 705.106	Sections 724.108 and 725.106
Training Program (Pilots)	Sections 704.115 and 705.124	Sections 724.115 and 725.124
Training and Qualification Records	Sections 704.117 and 705.127	N/A
Safety Management System	Sections 107.01, 107.02, 107.03, 107.04 604.183, 604.202, 604.203, 705.151, 705.152 and 705.153	N/A