

No. 5 / 2003 revised

BESLUIT DIRECTEUR CASAS

FLIGHT OPERATIONS

Section 1 FLIGHT CREW TESTING OR (PROFICIENCY) CHECKING PROCEDURES

1. APPLICABILITY

a) Before a person acts as a flight crew member of an aircraft he must have completed, as appropriate to the validity of his flight crew license, ratings and/or authorization, one of the following flight tests or (proficiency) checks as prescribed in the Act on Safety and Security of Civil Aviation in Suriname of 12 march 2002 and the Civil Aviation Regulations Suriname Part 2 and related attachments.

1. AN AIRCRAFT FLIGHT TEST required for the issuance of an aircraft class or type rating given to him by a CASAS inspector or DFTE;
 - a. FOR MULTI-PILOT AIRCRAFT, in a CASAS approved simulator or training device or, in case no approved or partial approved simulator or training device is available, a flight check in an aircraft and;
 - b. FOR OTHER AIRCRAFT, in the appropriate type or class of aircraft provided this aircraft is considered suitable to this purpose by CASAS.
2. A LICENSE RENEWAL CHECK every two (2) years.
3. AN INSTRUMENT RATING RENEWAL CHECK every one (1) year.
4. A PILOT PROFICIENCY CHECK (PPC) every six (6) months if working for an AOC holder.

Note: A PPC may also serve as a license or instrument rating renewal check provided the check at least consist of those maneuvers and/or procedures as contained in the applicable appendices of the "Bijlage 2" to the "No.:06/2003Besluit Directeur CASAS".

5. FOR FLIGHT INSTRUCTION OR CONDUCTANCE OF A FLIGHT CHECK as appropriate, to be given by the candidate and monitored by a CASAS inspector or specially appointed DFTE, for the purpose of the initial issue or renewal of a TRI rating, pilot examiner (DFTE) authorization or check airman (CA) approval;
- b) Before a person acts as a flight crewmember of a turbojet, turbofan, large aircraft or that is type certificated for more than one required flight crewmember, he must have completed the proficiency or flight checks listed in paragraph 1a in the PARTICULAR TYPE aircraft in which he is to act as flight crew member.

- c) A flight crew member who is qualified in more than one AIRCRAFT TYPE and completes the proficiency requirements in the heaviest AIRCRAFT TYPE, simultaneously fulfills the proficiency requirements for all other AIRCRAFT TYPES in which he is qualified, taking into account the requirements as prescribed in Decision Director CASAS no. 2
- d) For flexibility in compliance, a flight crewmember may take the required proficiency check in the month before, or the month after, the month in which it is considered to be due.
- e) CARS Part 8.10.1.18 and Part 3.2 provides that the maneuvers and procedures required for proficiency and flight checks as mentioned in paragraph 1a may be required to be performed in a flight simulator or other training device if the simulator or training device is one that is approved by CASAS for the particular maneuver or procedure.

2. MANEUUVRES AND PROCEDURES

- a) **General**. The proficiency check must be accomplished in the heaviest Type of Aircraft in which the pilot is to act as a flight crewmember. However, as indicated in the following Schedule of Maneuvers and Procedures a flight crew member may be required or allowed to perform certain maneuvers in a simulator or training device, or both, although the required maneuvers/procedures will be limited to those approved by CASAS.
- b) **Schedule of Maneuvers and Procedures**. For AOC holders the schedule of maneuvers and procedures must have the prior approval of CASAS and must reflect the criteria as contained in the CASAS approved Flight Crew Training Manual. All schedules must at least reflect the criteria contained in de applicable appendices to the “Bijlage 2” to the “No.:06/2003Besluit Directeur CASAS”.

3. GENERAL

- a. A request for approval of simulators/training devices for the performance of specific maneuvers and procedures should be submitted by letter to the Director of CASAS.

The letter should contain the following information:

- 1) Manufacturer's name and model designation of the device;
 - 2) Location specified for the operation of the device;
 - 3) Location(s) requested for evaluation by CASAS;
 - 4) Dates the device will be available to CASAS for evaluation; and
 - 5) A listing of the maneuvers and procedures for which approval is requested
- b. CASAS will, upon receipt of a request for simulator approval, assign personnel to conduct evaluations in accordance with the guidelines contained in this section. Evaluations may be completed at the operating site or, at the option of the applicant, the performance evolutions may be made at the factory locations and functional tests completed at the operating sites.

4. GUIDELINES

The following general guidelines will be used to determine the acceptability of simulators/training devices for the performances of maneuvers and procedures prescribed for flight crew proficiency checks. Acceptable simulator fidelity will be determined by pilot personnel and appropriate standards applied in areas of the flight envelope which will allow the most effective use of the device.

- a. Features and Characteristics.
 - 1) The cockpit should represent a full-scale mockup of the airplane simulated. Where movement of the controls and switches is involved, the direction of movement should be identical to that required for the airplane.
 - 2) The cockpit should include flight crew stations for pilot and co-pilot appropriate to the type airplane simulated.
 - 3) In response to control movement by a crewmember, all relevant instrument indications involved in the simulation of a particular airplane should be entirely automatic unless otherwise specified.
 - 4) Control forces and degree of actuation control travel should correspond to that which would occur in the airplane under actual flight conditions.

- 5) The rate of change of simulator instrument readings and of control forces should correspond to the rate of change, which would occur on the airplane simulated under actual flight conditions for any given command for change applied to the controls, in the applied power, or in aircraft configurations.
- 6) The effect of aerodynamic change for various combinations of drag and thrust normally encountered in flight should reasonably correspond to actual flight conditions. The effect of change in airplane attitude, thrust, drag, temperature, gross weight, center of gravity location and configuration should be included.
- 7) Simulator systems should simulate the airplane systems operations both on the ground and in flight. Systems should be operative to the extent that normal operating procedures, abnormal procedures and emergency procedures can be effectively accomplished.
- 8) There should be circuit breakers that effect procedures and functions resulting in observable cockpit indications.
- 9) NAV/COM equipment should reasonably correspond to that installed in the airplane and should operate within the tolerances specified for the airborne equipment.

b. Performance

A simulator approved for all the authorized maneuvers and procedures for the flight crew proficiency checks should be capable of the following performance capability:

- 1) Prestart checklists, appropriate control system checks; starting procedures, radio and equipment checks;
- 2) Power plant checks;
- 3) Take-offs with engine out at any selected speed;
- 4) Area departures, holding and arrivals;
- 5) An ILS to a point where the landing is assured;
- 6) An ADF and VOR approach with an engine failure;
- 7) Steep turns to 45° of bank and stalls in take-off, clean and landing configurations with 15° to 30° bank;
- 8) An approach to landing with simulated failure of 50% of the available power on one side;
- 9) A missed approach with an engine failure, during final approach of after transition to a missed approach;
- 10) A no flap approach; and
- 11) A rejected landing from a point approximately 50 feet above the landing runway.

c. Visual Systems

Where simulator approval with visual systems is requested for the performance of maneuvers and procedures authorized to be performed in a visual type simulator in the Schedule of Maneuvers and Procedures (paragraph 2b, section 1) the visual

attachment should enable the simulator to adequately demonstrate the capability to accomplish the evaluation objective. As required by the particular maneuver/procedure, the system should provide adequate maneuvering capabilities with acceptable fidelity in dynamic responses, picture quality, and correlation with airplane attitudes and position as displayed by the particular cockpit instrumentation.

d. Systems

The following system should function to the degree necessary to determine pilot proficiency throughout the performance of all the maneuvers and procedures demonstrated plus the emergency procedures outlined for the type airplane in the approved airplane flight manual.

- 1) Anti-icing and de-icing systems;
- 2) Automatic or other approach aids;
- 3) Stall warning, avoidance and stability augmentation devices;
- 4) Hydraulic and electric system failures;
- 5) Landing gear and flap system failures; and
- 6) Airborne NAV/COM equipment failure.

e. Function Standards.

An approved simulator should meet all the standards under this subparagraph for functional accuracy, performance, and characteristics. These standards are presented as guidance material only and are not to be considered as the basis for approval of a simulator.

- 1) Motion will be considered necessary for simulators approved for the Schedule of Maneuvers and Procedures under paragraph 2b (section 1). Approval of simulators without motion will be limited to airplane simulation of instrument flight procedures only.
- 2) Control forces should reasonably represent the airplane type simulated for static and dynamic longitudinal stability during climb, cruise, approach and landings. The simulator should return to trim within +/-10 from a speed within 15% of trim speed. The direction of the elevator force, pull or push, must be in the same direction as the airplane type simulated.
- 3) Control forces and stick force per "G unit" should be within +/-8 lbs or 25% of the encountered forces on the airplane;
- 4) Rudder force limits should be +/-15 lbs or +/-20%;
- 5) Landing Gear operating time: +/-4 seconds;
- 6) Wing flap operating time: +/-5 seconds;
- 7) Take-off acceleration time to V1: +/-15%;
- 8) Minimum control speed in flight: +/-10 kts;
- 9) Propeller feathering time: +/-4 seconds;
- 10) Stall warning speeds, stick shaker and buffet onset: +/-10 kts;
- 11) Calibration of Gyrocompass, turn & bank indicator in standard rate and 30° banked turns: +/-15%;
- 12) Manifold pressure for given BMEP and RPM;
- 13) N1 & N2 relationship, turbine engine, for given EPR: +/-3%;
- 14) Speed Vs thrust in level flight at cruise altitude: +/-10 kts; 4% or 04 Mach;
- 15) Climb performance: +/-15%;
- 16) Roll/rate in operational configuration: +/-2 seconds or 25%.

1. OBJECTIVE

Procedures and standards for nomination and use of Check Airman (CA) based on the CARS Part 2 and CARS Part 9

2. GENERAL

The CA is an air operator employee or an employee under contract by that air operator. CA's are authorized to conduct Pilot Proficiency Checks (PPC's), Line Indoctrination and/or Line Checks while employed by the air operator. When performing their duties, CA's are first and foremost acting pursuant to the provisions of the CARS Part 8 and 9.

The CA position has been instituted to allow an air operator to develop and maintain a program of flight crew checks pursuant to the requirements for an AOC holder and independent of the availability of CASAS inspectors.

Air operators must inform CASAS of their intentions to nominate potential CA's. This may be done by formal letter listing course candidates who will then be approved by CASAS. This is to verify the need for a CA in that company and that the nominee is acceptable to CASAS.

Air operators must inform CASAS of their intentions to contract ATO's or other personnel for the conduct of PPC's on their behalf. This may be done by forwarding the applicable ATO's approval (by the foreign CAA), the involved CA's and their applicable specifications. This is to verify the need for an ATO and that the involved CA's are acceptable for approval to CASAS. Requirements as stipulated in the CARS Part 8.10.1.41 and 8.10.1.43 are applicable.

A CA must be thoroughly familiar with the;

1. flight techniques, crew coordination procedures and SOP's of the air operator, and
2. the rules for testing and checking, and acceptable performance guidelines as stipulated in the appendix to this document.

An air operator shall advise CASAS when a CA is no longer employed or contracted by the company or will not be required to perform CA duties during the coming 24 months.

PPC's (except for line checks) shall not be conducted during revenue flights.

B. CA authorities (licensing)

A CA also has the authority to conduct competency checks for the renewal of

1. a license (CPL or ATPL every 2 years), and
2. an instrument rating (IR every year)

B. CA authorities (AOC holder)

The CA will be designated by name by CASAS in the approved function as a Check Airman for the conductance of the Company Proficiency Checks every 6 months as required by CARS 9.

3. CA NOMINEE QUALIFICATIONS

The CA pilot nominee shall:

1. hold a valid pilot license which would allow the applicant to fly commercially for the company employed by on the same type of aircraft used for checking privileges;
2. have accumulated a minimum of 1,000 hours as Pilot-in-Command;
3. have demonstrated flying proficiency on the type of aircraft for which the nominee seeks checking authority;
4. be or has been employed as a Pilot-in-Command in the same type of commercial operation for which the checking authority is sought; either aeroplane or helicopter;
5. have (previous) experience as a training pilot (instructor) or, in exceptional cases, have demonstrated equivalent ability and knowledge;
6. have demonstrated satisfactory knowledge of the contents and interpretation of the applicable CARS;
7. have demonstrated a thorough knowledge of the operator's operations manual, operating specifications, SOPs and applicable aircraft flight and operating manuals; and
8. have demonstrated his knowledge and ability to conduct on a suitable candidate a Pilot Proficiency/Instrument Renewal(s) or Line Check(s) if required as appropriate on the aircraft or simulator type on which the CA has been nominated.

A CASAS inspector or specially CASAS appointed DFTE will monitor the applicable check(s).

CA qualifications – non AOC employee

A CA who is not a current line pilot employed by an AOC holder (ATO or a person contracted by an air operator) may be accepted by the Director CASAS as a CA provided he meets all the applicable conditions with the following additional provisions:

1. the requirements as stipulated in CARS 8.10.1.41, as applicable.
Note: the candidate CA shall complete all the requirements of the air operator's approved training program for the aircraft type with the exception of line indoctrination and a line check
2. the requirements as stipulated in CARS 8.10.1.43, as applicable.
Note: the CA shall monitor two sectors from an observer's position on the applicable airplane of the AOC holder for which the exams are conducted, within three (3) months of being nominated;
3. where a PPC is required, the candidate CA shall pass a PPC conducted by a CASAS inspector or other CASAS appointed DFTE within the previous twelve (12) months.

4. CA DESIGNATION

The number of CA's and their conduct of flight checks will be closely monitored by, and at the option and approval of CASAS. An inspector of CASAS or a CASAS appointed company DFTE must monitor the conduct of a PPC by a candidate CA, before initial approval can be given. The approval to act as a CA is not transferable between air operators. The Director may suspend or cancel an approval to act as a CA.

For all CA's with PPC authority on multi-pilot aircraft prior to being authorized to conduct PPCs the candidate CA must;

1. have completed a CA course or equivalent;
2. attend a CA, or equivalent, refresher course every 5 years from the date of appointment.

The CA may be authorized to conduct checks on more than one class or type of aircraft. The authority will not be issued for more than three types of aircraft.

Note: Normally the Chief Flight Instructor of an AOC holder will be appointed as a DFTE by CASAS in order to conduct the competency checks of other CA's (if required), for the renewal of their TRI Rating (if applicable) and/or extension of their CA authority.

5. CA CURRENCY REQUIREMENTS

To conduct PPC's a CA must hold a valid PPC on type.

After initial approval a CASAS inspector shall observe the conduct of a PPC by a CA or a CASAS appointed DFTE, at least once during every 12 months. These observations form part of the OPS continued surveillance work program.

6. RECORDING OF PROFICIENCY CHECKS

The PPE will endorse the applicant's logbook or flight record and make an entry in his examiners activity record to show successful completion of the proficiency check. These records should contain the following:

- a) Name of applicant and his employer;
- b) Date, place, aircraft or ground device identification/type used in the proficiency check; and
- c) Name and license number of other PPE's whose certification has been accepted for parts of the proficiency check.

Section 4 ACCEPTABLE PERFORMANCE GUIDELINES (IR)

Candidates shall be informed of the levels of proficiency, which are required for satisfactory completion of an Instrument Initial of Renewal flight tests.

The following is a list of selected maneuvers from both the Instrument Rating Practical Test Standards. This list is not intended to be all-inclusive. It is intended that check airman's use it as a guide.

4.1 STEEP TURNS

- Bank Angles: 45° ± 5°
(30° for helicopter)
- Altitude: ± 100 feet
- Airspeed: ± 10 knots
- Heading: ± 10° of assigned rollout
(Specified heading)

4.2 APPROACH TO STAL

- Initiates recovery at first indication.
- Recovers to reference airspeed, altitude, and heading, allowing only the minimum loss of deviation.

4.3 DEPARTURE, ENTROUTE, HOLDING AND ARRIVAL

- Altitude: ± 100 feet
- Bank Angles: 45° ± 5°
(30° for helicopter)
- Airspeed: Maintains airspeed within ± 10 knots
- Heading: ± 10°
- Radials, Courses Bearings: Accurately tracks

4.4 PRECISION INSTRUMENT APPROACHES (ILS/MLS)

Initial Approach:

- Altitude: ± 100 feet
- Airspeed: ± 10 knots
- Heading: ± 10°
- Radials: Accurately tracks
- Courses: ± 10°
- Bearings: Accurately tracks

Final Approach:

- Localizer/Guide slope: Allows no more than ½-scale deflection
- Airspeed: -0/+5 knots of desired

- Decision Height (DH): Initiates missed approach immediately when the required visual reference is not distinctly visible and identifiable or
Transition to a normal landing approach when the aircraft is continuously in a position from which a descent to a landing on the runway of intended landing area can be made at a normal rate of descent using normal maneuvers

4.5 NONPRECISION INSTRUMENT APPROACHES (VOR/NDB/LOC)

Initial Approach:

- Altitude: ± 100 feet
- Airspeed: ± 5 knots
- Heading: $\pm 10^\circ$ of desired HDG
- CDI: Allows less than a full scale needle deflection
- RMI: $\pm 10^\circ$
- Radials: Accurately tracks
- Courses: Accurately tracks
- Bearings: Accurately tracks

Final Approach:

- Airspeed: -0/+5 knots of desired airspeed
- Heading: $\pm 5^\circ$ of desired HDG
- CDI: Allows no more than $\frac{1}{2}$ -scale deflection
- RMI: $\pm 10^\circ$ of desired BRG
- Descent: Establishes a rate of descent that will ensure arrival at the MDA with the aircraft continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate using normal maneuvers.

- Minimum Descent Altitude (MDA): Maintains, when reached, within +100/-0 feet to the missed approached point (MAP)

4.5 CIRCLING APPROACH

Does not exceed the visibility criteria or descend below the appropriate circling altitude until in a position from which a descent to a normal landing can be made.

The bank angle should not exceed 30° and:

- Airspeed: ± 5 KIAS

- Altitude: (MDA) – 0/+100 feet
- Maneuvers the aircraft, after reaching authorized circling approach altitude, by visual reference to maintain a flight path that permits a normal landing on a runway area at least 90° from the final approach course.

4.5 MISSED APPROACH

- Execute when the required visual references for the intended runway are not distinctly at the missed approach point (MAP)
- Airspeed: ± 5 knots
- Altitude: ± 100 feet
- Heading: ± 5°
- Courses: Accurately tracks
- Radials: Accurately tracks
- Bearings: Accurately tracks

4.5 ENGINE FAILURE

- At V1
- Identification: Correctly identifies, verifies, and secures the malfunctioning power plant following the prescribed checklist
- Aircraft Control: Maintains positive aircraft control while establishing a 5° bank toward the operating power plant, or as recommended by the manufacturer
- Airspeed: -0/+5 knots establishes desired airspeed
- Heading: Maintains runway heading ± 5°
- Initial Climb: Maintains desired airspeed
- Airspeed: -0/+5 knots

In cruises:

- Identification: Correctly identifies, verifies, and secures the malfunctioning power plant following the prescribed checklist
- Aircraft Control: Maintains positive aircraft control while establishing a 5° bank toward the operating power plant, or as recommended by the manufacturer
- Altitude: ± 100 feet
- Heading: ± 10°
- Airspeed: ± 10 knots

4.5 LANDING

- Traffic Pattern (Normal or Engine Inoperative)
- Altitude: ± 100 feet
- Heading: $\pm 5^\circ$
- Airspeed: ± 10 knots

- Final Approach (Normal or Engine Inoperative)
- Maintains a stabilized descent angle and the recommended approach airspeed, with gust factor applied, ± 5 knots
- Touches down smoothly beyond and within 200 feet of a specified point, with no drift and the airplane's longitudinal axis aligned with the runway centerline.

4.5 NORMAL, ABNORMAL, and EMERGENCY PROCEDURES

A level of knowledge of the aircraft operational procedures such that the client will be able to demonstrate operation of the aircraft and aircraft systems in the operational environment (IFR/VFR) in accordance with the applicable operating instructions.

FOR**PPL – CPL – ATPL and AIRCRAFT TYPE RATINGS**

Candidates shall be informed of the levels of proficiency, which are required for satisfactory completion of an initial, or renewal flight test.

The following is a list of selected maneuvers. This list is not intended to be all-inclusive.

1. STEEP TURNS

- Bank Angles: $45^{\circ} \pm 5^{\circ}$
(30° for helicopter)
- Altitude: ± 100 feet
- Airspeed: ± 10 knots
- Heading: $\pm 10^{\circ}$ of assigned rollout
(specified heading)

2. APPROACH TO STALL

- Initiates recovery at first indication.
- Recovers to reference airspeed, altitude, and heading, allowing only the minimum loss of deviation.

3. DEPARTURES, ENROUTE, and ARRIVAL

- Altitude: ± 100 feet
- Airspeed; Maintains airspeed within ± 10 knots
- Heading: $\pm 10^{\circ}$
- Radials, Courses, Bearings: Accurately tracks

4. APPROACHES (Traffic Pattern)**Initial Approach**

- Altitude: ± 100 feet
- Airspeed: ± 5 knots
- Heading: $\pm 10^{\circ}$

Final Approach

- Airspeed: $-0 / + 5$ knots desired airspeed with gust factor applied ± 5 knots

- Heading: $\pm 5^\circ$ of desired HDG
- Descent: Establishes a rate of descent that will ensure a landing on the intended runway can be made at a normal rate using using normal Maneuvers.

5. LANDING

- Normal: Touches down smoothly, with no drift and the aircraft longitudinal axis aligned with the runway centerline
- Spot landing without any power Assistance: Touches down within 50 m (150 feet) of a specified point.
- Baulked landing: Executes when the intended runway becomes obstructed.

Maintains positive aircraft control and airspeed as recommended by the operating instructions for the airplane being used.

Operates the flaps in proper sequence and uses correct power and trim settings.
- Heading: $\pm 5^\circ$

6. EMERGENCY PROCEDURES

A level of knowledge of the aircraft operational procedures and be able to demonstrate operation of the aircraft and aircraft systems in accordance with the applicable instructions.

Director CASAS,

V.L. Hanenberg