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(06/2017)

PILOT PROFICIENCY CHECK AND AIRCRAFT TYPE RATING

Flight Test Guide (Aeroplanes)

First Edition (Revision 1)

TC-1002344

Canada

First Edition (Revision 1)

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FOREWARD

This manual contains procedures and guidelines on the conduct of Pilot Proficiency Checks and Aircraft Type Ratings for the use of Civil Aviation Safety Inspector (CASI) and Approved Check Pilots (ACPs). Transport Canada issuing authorities approve ACPs and authorize them to conduct Pilot Proficiency Checks (PPC) and/or Line Checks. When performing their duties, ACPs act as delegates of the Minister according to subsection 4.3(1) of the *Aeronautics Act* and must follow the procedures specified in this manual.

Note: Revision 1 of the First Edition has been updated consistent with the Approved Check Pilot Manual (10th Edition), TP6533 and ACP/AQP Bulletin 01/14.

Robert Sincennes
Director, Standards

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ACRONYMS

ACP - Approved Check Pilot
ADO - Associate Director, Operations
AFM - Aircraft Flight Manual
AOM - Aircraft Operating Manual
ATC - Air Traffic Control
ATPL - Airline Transport Pilot Licence, AA – Aeroplane; AH – Helicopter
CARs - Canadian Aviation Regulations
CASI - Civil Aviation Safety Inspector
CASS - Commercial Air Service Standards
COM - Company Operations Manual
CPL - Commercial Pilot Licence (CA – Aeroplane or CH – Helicopter)
CRP - Cruise Relief Pilot
CRM - Cockpit Resource Management
EASA - European Aviation Safety Agency
ETOPS - Extended Twin Engine Operations
FAA - Federal Aviation Administration
FARs - Federal Aviation Regulations
FCOM - Flight Crew Operations Manual
FOM - Flight Operations Manual
FSTD - Flight Simulation Training Device
HFM - Helicopter Flight Manual
IAP - Instrument Approach Procedure
IFR - Instrument Flight Rules
IFT - Instrument Flight Test
MAP - Missed Approach Point
MMI – Missing, Malfunction or Inoperative (components)
PIC - Pilot-in-Command
PPC - Pilot Proficiency Check
RFM - Rotorcraft Flight Manual
SCIG - Simulator Component Inoperative Guide
SIC - Second-in-Command
SID - Standard Instrument Procedure
SOP - Standard Operating Procedure
STAR - Standard Terminal Arrival
TATC - Transportation Appeal Tribunal of Canada
TCC - Transport Canada Centre
TC AIM - Transport Canada Aeronautical Information Manual (TP 14371)

TEM - Threat and Error Management

UAS - Undesired Aircraft State

DEFINITIONS

ACP (Type A) - An ACP who is authorized to conduct PPCs and line checks (Subpart 705 of the CARs only).

ACP (Type B) - An ACP who is authorized to conduct line checks (Subpart 705 of the CARs only).

ACP (VFR Only) - An ACP who is authorized to conduct PPC/VFR flight checks only.

Airborne PPC - The airborne portion of a PPC that is conducted in conjunction with the simulator portion of the PPC. This may be as a result of a simulator's level of approval and fidelity, the particulars of an approved training program or the status of the candidate.

Aircraft Operating Manual (AOM) - A pilot operating manual, a pilot operating handbook (POH), a flight crew operating manual (FCOM) or a manual established by the operator for the use and guidance of flight crewmembers in the operations of its aircraft.

Aircraft PPC - A PPC that is conducted entirely in an aircraft.

Approved Check Pilot (ACP) - A person holding an official authorization to conduct flight checks on behalf of the Minister of Transport pursuant to Part 1, Section 4.3(1) of the Aeronautics Act.

Authorized Person - A person who is delegated the authority to act as a Licensing Agent for the purpose of issuing temporary privileges (i.e., type ratings and/or instrument ratings) in the candidate's Aviation Document Booklet (ADB) or by signing the additional privileges section on the back of the candidate's temporary license or by completing the certification of an Additional Privileges Card (Form 26-0267).

Canadian Aviation Document (CAD) - Subject to subsection (3) of the Aeronautics Act, any licence, permit, accreditation, certificate or other document issued by the Minister under Part I of the Aeronautics Act to or with respect to any person or in respect of any aeronautical product, aerodrome, facility or service.

Certificate – Certificate means an air operator certificate in this document.

Civil Aviation Safety Inspector (CASI) - A Transport Canada inspector who is trained and authorized to conduct flight checks and ACP (initial and recurrent) monitors.

Commercial Air Service Standards (CASS) - CARs Standards published under the authority of the Minister that apply in respect of commercial air services operated by air operators. Referred to as the CARs Standard(s) in this manual.

Company Check Pilot Manual (TP6533) - Predecessor of the Approved Check Pilot Manual (TP6533). This document is formally referenced in (i.e., enabled by) the CARs and Standards.

Company Employee - A person that is employed on a part time basis, full time basis or on contract on a seasonal basis.

Conduct - To take an active role in all phases of a flight check, including pre-flight preparation, the briefing, the control and pace of the various sequences, the assessment of the flight check candidate's performance, the debrief and the completion of the required documents including certification of the candidate's licence.

Contemporary Crew Resource Management (Contemporary CRM) - The current expression of crew resource management (CRM). Contemporary CRM integrates technical skill development with communications and crew coordination training and operational risk management by applying threat and error management (TEM) concepts.

Crew Resource Management (CRM) - The effective utilization of all available resources to achieve safe and efficient operations. The objective of CRM is to enhance communications, human factors and management skills of the crew members concerned. Emphasis is placed on the non-technical aspects of crew performance.

Deviation – A quantifiable measurement of a variation in precision from a specified flight test exercise tolerance. Deviations are incorporated in the aircraft handling skill element of the 4-Point Marking Scale.

Error - A qualitative assessment of an action or inaction by a flight crew that leads to a variation from flight crew intentions or expectations. Errors are incorporated in the technical skills and knowledge element of the 4-Point Marking Scale.

Flight Check - In this manual, refers to a PPC.

Flight Test Exercise - A manoeuvre, task or item listed in the following:

- (a) Canadian Aviation Regulations (CARs) Standards;
- (b) Transport Canada Publication TP 14727 - Pilot Proficiency Check and Aircraft Type Rating - Flight Test Guide (Aeroplane);
- (c) TP 14728 - Pilot Proficiency Check and Aircraft Type Rating - Flight Test Guide (Helicopter); and
- (d) Transport Canada Form 26-0249 or 26-0279 - Flight Test Report - Pilot Proficiency Check form.

Flight Simulation Training Device (FSTD) - A Transport Canada-approved full-flight simulator or flight training device as defined in the Aeroplane and Rotorcraft Simulator Manual (TP9685) and certified in accordance with Section 606.03 of the CARs.

IFR-Related Sequence - A flight test exercise that is associated with instrument flight procedures such as, but not limited to, flight planning, standard instrument departures (SIDs), holds, standard terminal arrival routes (STARs), instrument approaches and missed approaches.

Instrument Proficiency Check (IPC) - A recurring event to confirm retention of a level of proficiency that meets the standards of performance required for the issuance of an instrument rating. Refer to Advisory Circular (AC) 401-004.

Licensing Agents - see Authorized Person.

Line Check - A flight check conducted in accordance with Paragraph 705.106(1)(d) of the CARs which is undertaken upon completion of line indoctrination.

Line Check Pilot - An individual currently employed as a pilot-in-command by a Subpart 705 of the CARs operator who is appointed to conduct line checks under the operator's line check program. These line checks exclude those required for extended twin engine operations (ETOPS), cruise relief pilot (CRP) and RNAV operations.

Manager, Simulator Program (MSP) – The person responsible (at Transport Canada) for the overall administration and operation of the National Simulator Evaluation Program (NSEP).

Missing, Malfunction or Inoperative (MMI) Components – Under the FAA, a component of the Flight Simulator Training Device (FSTD) that is required to be present and correctly operate for the satisfactory completion of a manoeuvre, procedure, or task.

Non-Technical Skill Elements - In this manual, refers to cooperation, leadership and managerial skills, situational awareness and decision making. Non-technical skill elements are incorporated in the 4-point marking scale.

Operator - means the holder of an air operator certificate under Part VII of the CARs or the holder of a private operator registration document under Subpart 604 of the CARs.

Pilot Flying (PF) - The term pilot flying (PF) refers to the pilot responsible for managing the current and projected flight path of the aircraft in a multi-crew cockpit.

Pilot-In-Command (PIC) - In relation to an aircraft, the pilot having responsibility and authority for the operation and safety of the aircraft during flight time.

Pilot Monitoring (PM) - The term pilot monitoring (PM) replaces pilot not flying (PNF). The PM is responsible for monitoring the current and future projected flight path vector of the aircraft in a multi-crew cockpit.

Pilot Not Flying (PNF) – Pilot not flying (PNF) has been replaced by pilot monitoring (PM) in this manual. See pilot monitoring (PM)

Pilot Proficiency Check (PPC) - A flight check conducted by an approved check pilot (ACP) or Civil Aviation Safety Inspector (CASI) in accordance with the appropriate PPC Schedule specified in Part VII Standards of the CARs.

Plan of Action – Terminology adopted from the Federal Aviation Administration (FAA). A plan of action is similar to a scripted PPC, however is less formal. It is a tool for the sole use of the ACP to be used in evaluating the candidate. A plan of action contains a list of all required flight test exercises from the appropriate Part VII Standard of the CARs - PPC Schedule and may also include (as appropriate) one or more scenarios that group several required flight test exercises together.

PPC/IFR – A pilot proficiency check (PPC) conducted under instrument flight rules (IFR). A PPC/IFR is deemed to meet various requirements of an instrument rating including the initial issuance.

PPC/VFR - A pilot proficiency check conducted under visual flight rules (VFR). A PPC/VFR is deemed to meet the requirement for VFR operations only.

Qualified Person - In the case of PPCs conducted in a simulator means:

- (a) a pilot who holds a valid PPC (or foreign equivalent) on the same type of aircraft for which the other candidate is being checked on;
- (b) a person who has been recommended for a flight check on that aircraft type; or
- (c) a qualified training pilot on the same type of aircraft for which the candidate is being checked on, and that person is acceptable to both the operator and the PPC candidate.

Safety Pilot - In the case of a multi-crew aircraft, a training pilot or a pilot who holds a valid PPC on the same type of aircraft on which the candidate is being checked.

Scripted PPC - A document that governs the events presented to candidates during a PPC that is conducted in a simulator. The script provides a detailed plan for the execution of all mandatory flight test exercises (i.e., manoeuvres) in accordance with the Part VII Standard of the CARs– PPC Schedule. Additional information such as Air Traffic Control (ATC) communications and simulator device instructions are provided.

Second-In-Command (SIC) - In relation to an aircraft, a pilot who reports to the pilot-in-command (PIC) on an aircraft type certificated for, or in operations requiring more than one required pilot flight crewmember. Synonymous with first officer (F/O) in this document.

Simulator Component Inoperative Guide (SCIG) – Under Transport Canada, a guide providing relief from initial simulator approval requirements.

Simulator PPC - A PPC conducted in a full-flight simulator.

Special Authorization - The authorizations, conditions and limitations associated with the air operator certificate (AOC) and subject to the conditions in the operations manual. The term special authorization replaces operations specification (Ops Spec).

Standard Operating Procedure(s) (SOPs) - procedures established by an operator enabling the crewmembers to operate the aircraft within the limitations specified in the aircraft flight manual (AFM), aircraft operating manual (AOM), and/or company operations manual (COM).

TCE/ACP - An ACP who gains their qualification on the basis of their FAA (Part 142) training center evaluator (TCE) qualification and experience.

Technical Skill Elements - In this manual, refers to aircraft handling and technical skills and knowledge. Technical skill elements are incorporated in the 4-Point Marking Scale.

Threat and Error Management (TEM) - Threat and error management (TEM) can be considered defensive flying. It equips a pilot with skills and behaviour to recognize and avoid problems which if ignored or left unattended could result in an undesired aircraft state (UAS) and possibly lead to an incident or accident. TEM proposes that threats, errors and even undesired aircraft states (such as an altitude deviation) are everyday occurrences that pilots must manage to maintain safety. TEM is central to contemporary CRM.

Training Pilot - A pilot who meets the requirements of the applicable Part VII Standard of the CARs.

Transportation Appeal Tribunal of Canada (TATC) - A quasi-judicial body established in 2003 pursuant to the Transportation Appeal Tribunal of Canada Act. The Tribunal replaced the Civil Aviation Tribunal, which was established under Part IV of the Aeronautics Act in 1986.

Undesired Aircraft State (UAS) - An aircraft position, speed, attitude or configuration that results from a flight crew error, action or omission which clearly reduces safety margins.

GENERAL

INTRODUCTION

- (1) This Pilot Proficiency Check (PPC) and Type Rating Aeroplane Flight Test Guide is published by Transport Canada Commercial Flight Standards (AARTF) to establish the standards for PPC's and Aeroplane Type Ratings. Transport Canada Inspectors and Approved Check Pilots (ACPs) will conduct PPCs in compliance with these standards. Air Operators, Training Pilots and candidates should find these standards helpful in preparation for the PPC.
- (2) This Flight Test Guide is available from <http://www.tc.gc.ca/eng/civilaviation/publications/menu.htm>
- (3) For more information and to submit suggestions for amendment, please contact:

Transport Canada
Commercial Flight Standards (AARTF)
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Ottawa, ON K1A 0N8

AIM OF A PPC

- (1) The aim of a PPC is to determine that the candidate meets the knowledge and skill requirements to operate an aircraft, its systems and components under normal, abnormal and emergency conditions in a safe and competent manner, and if applicable, in accordance with the air operator's approved SOPs and policies (i.e., stabilized approach).
- (2) The aim of a PPC is also to improve standards of instruction and training through feedback to the operator or training organization of those flight test exercises, policies and/or procedures (i.e., SOPs) that are out of date, weak or commonly unsuccessful.

ASSESSMENT OF PPC PERFORMANCE

- (1) This PPC and Aircraft Type Rating Flight Test Guide - Aeroplane comprises exercises for; the initial issuance or renewal of a PPC, the initial issuance of an instrument rating, and the addition of an aircraft type rating to a licence.
- (2) Each exercise has an aim, a description and performance criteria that list the mandatory elements an ACP must assess. The aim includes what the candidate must accomplish; the description outlines the conditions under which to perform the exercise (in accordance with the appropriate PPC schedules in Canadian Aviation Regulations (CARs) Part VII), and the performance criteria outline the acceptable standards of performance that the candidate must demonstrate.
- (3) These criteria assume the operation of the aeroplane will be in accordance with; the manufacturer's specifications, recommended speeds, and configurations in the Pilot's Operating Handbook/Aircraft Flight Manual (POH/AFM) or other approved data.
- (4) The ACP will conduct flight checks under normal conditions whenever possible and will take into consideration unavoidable deviations from the published criteria due to weather, traffic or other situations beyond the control of the candidate. The ACP will evaluate the candidate on the use of an appropriate checklist related to the specific exercise. Where the ACP deems the use of the checklist, while accomplishing an exercise is unsafe or impractical the candidate may review of the checklist after the elements are complete.

ADMISSION TO THE PPC – INITIAL/RENEWAL

Establishing Candidate(s) Eligibility - PPC

- (1) In order to be admitted to a PPC, the ACP must ascertain the candidate's eligibility. This will include a review of required documentation as well as a generalized assessment of the candidate's readiness to undertake a PPC.
- (2) Photo Identification
 - (a) The following is acceptable as photo identification:
 - (i) a valid Aviation Document Booklet (ADB), or
 - (ii) a valid and original government-issued photo identification with signature.
- (3) Pilot Licence and Medical Certificate
 - (a) The following is required:
 - (i) a valid *Aviation Document Booklet* (ADB) with a valid category one (1) medical certification meeting the medical standards for the licence; or
 - (ii) Where an *Aviation Document Booklet* (ADB) is not available, the candidate will be required to produce a *Temporary Licence* (Form 26-0265) and a *Temporary Medical Certificate* (Form 26-0055)
- (4) Training Files

- (a) A quick review the candidates training file is required. ACPs should look for any obvious omissions. This is done in conjunction with reviewing the PPC recommendation.
- (5) PPC Recommendation
- (a) A recommendation certifying that all required ground training, examinations and flight training has been completed in accordance with the company's approved training program.
Note: required ground training does not include the following:
 - (i) surface contamination (seasonal);
 - (ii) dangerous goods;
 - (iii) high altitude indoctrination (HAI);
 - (iv) survival;
 - (v) aircraft servicing and handling; or
 - (vi) elementary work.
 - (b) The recommendation must be signed by the chief pilot or delegate.
 - (c) The recommendation must be signed and dated within 30 days prior to the Flight Check.
Note: Recommendations signed and dated beyond 30 days prior to the Flight Check may be amended by the chief pilot or delegate indicated that
 - (i) additional training was considered to ensure competency and the candidate's success during the flight check; and
 - (ii) the candidate is still considered competent to successfully complete the flight check.
- (6) Additional Requirements
- (a) If temporary privileges for a new type rating and/or initial instrument rating are sought, the *Application for Endorsement of a Rating* (form 26-0083) with associated proof of meeting knowledge and experience requirements (e.g., INRAT, IATRA, SARON, SAMRA, HARON, HAMRA), including a written recommendation from a qualified person must be completed.
 - (b) Upon review, the ACP will return the application to the applicant. The ACP will only formally accept the application upon the successful completion of the PPC and the applicant having met all of the licensing requirements.
- (7) Mental and Physical Readiness
- (a) ACPs must be reasonably confident that the candidate is mentally and physically ready to proceed with the Flight Check.
 - (b) By agreeing to proceed with the Flight Check, the candidate has declared themselves fit.
- (8) Unavailable Documentation
- (a) Except where company procedures have been established and accepted by Transport Canada, a Flight Check will not be conducted if licensing and/or training documents are not presented, not valid, or if the company has failed to provide all relevant training for the candidate as specified in the operator's approved training program.
 - (b) PPCs Conducted Abroad / Unavailable Training Documentation
 - (i) Where training documentation is not available due to impracticality, the candidate must provide documentation signed by a Chief Pilot or delegate recommending the candidate for the PPC and certifying that the relevant training has been completed.

- (ii) Relevant training includes initial or recurrent training appropriate for the aircraft type and type of operation. This includes ground training, examinations and flight training.

AIRCRAFT/SIMULATOR AND EQUIPMENT REQUIREMENTS

PPC - Simulator

- (1) Simulator Requirements
 - (a) Except as otherwise noted, a simulator used for flight checks must:
 - (i) meet the requirements of the Aeroplane and Rotorcraft Simulator Manual;
 - (ii) be certified in accordance with Section 606.03 of the CARs – Synthetic Flight Training Equipment ;
 - (iii) provide visual scenery approved for circling to permit the demonstration of one approach and manoeuvre to land, where the flight crew is authorized to conduct circling approaches in accordance with the company operations manual or SOP's; and
 - (iv) with respect to visual scenes used during PPCs, only the use of qualification scenes and approved custom scenes is permitted. The use of generic scenes is not permitted.
- (2) Weather Simulation
 - (a) Simulated weather conditions for the required approaches should be set at or close to the minimum weather criteria specified on the applicable approach charts.
- (3) Communications
 - (a) The simulator equipment must have suitable two-way intercom voice communication that permits clear communication with the ACP. The intercom system should be used during the flight check.
- (4) ATC Role Playing
 - (a) While role playing ATC, ACPs must provide realism in their communications. This includes distractive communications on occasion. Actions and events within the cockpit must be assumed to be unknown unless communicated by way of a radio transmission.
 - (b) ACPs must:
 - (i) provide clear and unambiguous clearances and instructions using standard ATC phraseology;
 - (ii) deliver ATC assistance that would normally be available; and
 - (iii) avoid unrealistic ATC assistance specifically intended to prevent crew errors.
- (5) Device Operation
 - (a) The person operating the flight simulation training device shall have sufficient training and experience on the equipment and have the qualifications, required by the device certificate holder, to ensure execution of the flight check in accordance with the profile or sequencing of events specified by the ACP.
 - (b) Another qualified person will operate the equipment where the ACP does not possess the sufficient training and experience or necessary (device certificate holder) qualification or does not wish to operate the device during the flight check;
 - (c) The device operator, if other than the ACP, must have been briefed prior to the flight check on the flight profile, sequencing of events and the clearances to be delivered. Having the assistance of a device operator does not relieve the ACP of his/her responsibilities to ensure the plan is adhered to. The ACP must maintain a constant vigilance over the device operator.

- (6) Repositioning and Position Freeze
 - (a) To ensure realism, ACPs must conduct PPCs in real time as much as possible. The use of position freeze and repositioning are to be used sparingly according to the ACP's best judgment.
- (7) Available documentation
 - (a) Approved documents, such as aircraft operating manuals and minimum equipment lists, etc., must be made available to the flight check candidate(s) should the need to refer to them arise during the course of the check.
- (8) Candidate Seat Assignment
 - (a) The candidate will occupy the pilot seat associated with the candidate's respective duty position.
- (9) ACP Seat Assignment
 - (a) ACPs will not participate as a crewmember during PPCs conducted in the simulator. They will occupy an observer's seat.
 - (b) Simulators must have an approved seat (suitable for observing the flight crew) secured to the floor and fitted with positive restraint devices for each observer. The seat must safely restrain the occupant during any known or predicted motion system excursion.
- (10) Simulator Unserviceabilities
 - (a) If the simulator has recorded unserviceabilities or defects, the ACP will refer to the Transport Canada approved Simulator Component Inoperative Guide (SCIG) associated with that device to determine whether a PPC may proceed.
 - (b) On simulators approved by the FAA, unserviceabilities documented on the Missing, Malfunction or Inoperative (MMI) list is available to help determine whether a PPC may proceed.
 - (c) Regardless of information documented on either the SCIG (Transport Canada) or the MMI (FAA), ACPs must be satisfied that simulator unserviceability will not impede the ability of the candidate to demonstrate their proficiency.
- (11) Simulated System Failures
 - (a) System failures must be practical and reasonable. Multiple failures must be related and only cascade as a result of an initial failure (i.e., an engine-driven hydraulic pump fails as a result of an engine's failure) or as a result of a candidate's actions. Multiple unrelated failures (i.e., compound failures) must not be provided.
 - (b) A simulated system failure which has been assessed and deferred prior to dispatch, and has no impact on the flight characteristics of the aircraft, may be present throughout the PPC, whole or in part, and is deemed to be unrelated to subsequent simulated system failures (e.g., dispatch with one flight management guidance computer (FMGC) unserviceable followed by the inflight failure of a second FMGC).
- (12) Flight Check Data (Screen Printout)
 - (a) A plotting device (i.e., screen printout) is often beneficial when a flight test exercise is not performed to standard. This data should be presented to the candidate during a flight check debrief and retained by the ACP.
 - (b) It is common practice to attach a copy of this printout to the *Flight Test Report - Pilot Proficiency Check* form (Form 26-0249 or 26-0279) retained by the ACP. This information could be useful should an appeal to the Transportation Appeals Tribunal of Canada (TATC) be submitted.

PPC - Aircraft

- (1) Under certain conditions, both PPCs and line checks may be conducted in an aircraft. While line checks may be conducted during a revenue event, PPCs may not.

- (2) Safety
- (a) Safety must be prioritized during flight checks conducted in aircraft. The decision to commence a flight check in an aircraft is at the discretion of the ACP who must determine that:
- (i) weather conditions are sufficient to avoid hazardous operation of the aircraft during a Flight Check;
 - (ii) the aircraft is airworthy; and
 - (iii) the candidate's documents, as required by the CARs are valid.
- (b) If not participating as a flying crewmember (e.g., occupying a jump seat instead), ACPs are not passengers. ACPs will remain alert for potential hazards at all times and have a duty of care to intervene appropriately to maintain the safety of the flight. ACPs will also intervene appropriately to avoid potentially non-hazardous violations.
- (3) Aircraft Requirements
- (a) Except as otherwise noted, aircraft used for flight checks will satisfy the following:
- (i) possess a valid and current Canadian or foreign Flight Authority in accordance with Subpart 507 of the CARs that has no operating limitations that prohibit the performance of the required flight check manoeuvres;
 - (ii) meet the requirements of Section 605.06 of the CARs – *Aircraft Equipment Standards and Serviceability*. (where all required equipment must be serviceable and the maintenance requirements current); and
 - (iii) be flown in accordance with the requirements of Section 602.07 of the CARs – *Aircraft Operating Limitations* and operated within the approved flight operating limitations (Day/Night/VFR/IFR), airframe limitations, and engine limitations set out in the approved POH/AFM/RFM or approved POH/AFM/RFM supplements.
- (b) Flight Controls
- (i) All aircraft used for flight checks must be equipped with fully functioning dual control and provide a satisfactory and appropriate means of audio and verbal communication.
- (4) Candidate Seat Assignment
- (a) For the pilot flying (PF) portion of their PPC, the candidate will occupy the pilot seat associated with the candidate's respective duty position.
- (5) ACP Seat Assignment
- (a) PPC
- (i) In an aircraft certified for single-pilot operation, the ACP will occupy the second-in-command seat except where the operator has indicated in its operations manual (OM) that all flights will require a two-person crew.
 - (ii) In an aircraft certified for operations with a minimum flight crew of two, the ACP will occupy the jump seat.
 - (iii) When the aircraft type certificate or an operator's OM requires two pilots and the aircraft is not equipped with a jump seat, the ACP may occupy a passenger seat nearest to the cockpit for the landing and take-off. Thereafter, safety permitting, the ACP may position them self between the two pilot seats to observe the check. If this is not practical the ACP may occupy a pilot position and act as the safety pilot.
- (b) Line Check
- (i) ACPs conducting line checks will occupy either a crew position or jump seat.

- (ii) When conducting the line check from one of the crew positions, the ACP will carry out the duties of that position to the best of their abilities. No errors will be purposely introduced.
 - (iii) A safety pilot is not required during a line check.
- (6) **Safety Pilot**
 - (a) For safety of flight and legal purposes, a safety pilot must be designated and occupy one of the pilot seats during a PPC. An operator will normally designate a safety pilot acceptable to the ACP.
 - (b) Prior to flight, the safety pilot must be briefed by the ACP on their role and duties. These will include:
 - (i) safe checking practices which specify:
 - (A) transfer of aircraft control;
 - (B) touch-and-go procedures;
 - (C) procedures for simulating an inoperative engine;
 - (D) simulated abnormal and emergency procedures;
 - (E) response to an actual emergency; and
 - (F) any other element that is particular to the aircraft type.
 - (ii) the potential need for physical intervention; and
 - (iii) supporting crewmember duties;
 - (iv) ACPs occupying safety pilot positions must be:
 - (A) type rated;
 - (B) current on the aircraft;
 - (C) trained and competent with respect to company operations; and
 - (D) trained and competent to act as a company training pilot.

FLIGHT CREW CONCEPT

Flight Crew Jeopardy - PPC

- (1) Generally speaking, a team either succeeds or fails together.
- (2) Where two candidates are being assessed in a normal operational crew setting (i.e., a pilot-in-command paired with a second-in-command), both candidates are equally subject to flight crew jeopardy during both assessments.
- (3) **Exceptions to Flight Crew Jeopardy**
 - (a) **Pilot Flying (PF) Induced Errors**
 - (i) Pilot flying (PF) induced errors where it would be unreasonable to expect the pilot monitoring (PM) to have the opportunity to take control or take action to manage the error.
 - (ii) PF induced errors where PM's support has been appropriate will also be assigned to the PF rather than both candidates.
 - (iii) An example of this includes a loss of control during an engine failure during take-off (aeroplane) or a tail rotor strike upon landing (helicopter) where all PM actions and calls have been appropriate.
 - (b) **Seat Substitute**

- (i) If a seat substitute has been assigned to support a PPC, flight crew jeopardy will not apply to that individual.

PILOT MONITORING (PM) DUTIES

- (1) A strict adherence to procedures associated with each crew position is essential. To check the proper division of duties between the PF and the PM requires observation during normal and abnormal procedures. ACPs must ensure satisfactory compliance with PM duties as detailed in the AOM and company SOPs.
- (2) Normally an error in PM duties will be observed during such things as FMS/RNAV programming, checklist procedures or general cockpit duties specified in company SOPs.
- (3) Each pilot will demonstrate PM duties sufficient to determine compliance with and knowledge of aircraft procedures and company SOPs including normal and abnormal procedures. Flight crew may demonstrate PM duties from a seat position that they do not normally occupy as in the case for PPCs with two Captains or two F/Os. In this situation, the pilots must receive PM training before the PPC in the seat they are to occupy for the PPC.

COMBINED SINGLE-PILOT AND MULTI-CREW PPCS

- (1) Some operators operate the same aircraft with both multi-crew and single crew assignments. Under these conditions, operators will have a special authorization to operate with “minimum crew without a second-in-command”. Operating requirements are outlined in Section 703.86 of the CARs and the associated CARs Part VII Standard.
- (2) Pilots required to operate under these conditions must demonstrate both single-pilot and multi-crew proficiencies during a PPC. During the multi-crew portion of a PPC, these pilots will follow the appropriate CARs Part VII - PPC Schedule entirely. For the single-pilot portion of the PPC, these pilots will (as a minimum) carry out the following additional flight test exercises without assistance from the other crew member:
 - (a) Single-Pilot IFR
 - (i) a normal take off in accordance with the AFM/HFM establishing simulated IFR at or before reaching 200 feet above airport elevation;
 - (ii) for multi-engine aircraft, a simulated engine failure after take-off, in accordance with the CARs Part VII Standard - PPC Schedule;
 - (iii) one instrument approach performed in accordance with procedures and limits published in the CAP or in an equivalent foreign publication; and
 - (iv) for multi-engine aircraft, one landing and manoeuvring to that landing with a simulated failure of 50 percent of available engines.

Note 1: Single-pilot IFR is normally applicable to aeroplanes only.

Note 2: Any of the sequences above may be combined.
 - (b) Single-Pilot VFR
 - (i) a normal take off in accordance with the AFM/HFM;
 - (ii) a simulated engine failure after take-off, as per the CARs Part VII Standard - PPC Schedule;
 - (iii) one malfunction performed in accordance with the AFM/HFM; and
 - (iv) one landing and manoeuvring to that landing with a simulated engine failure.

Note 1: Single-pilot VFR is applicable to aeroplanes and helicopters.

Note 2: Any of the sequences above may be combined.
 - (c) The ACP may ask the candidate to demonstrate any other flight test exercise listed in the CARs Part VII Standard - PPC Schedule not requiring a multi-crew assignment.

AIRBORNE PPC (FLIGHT CHECK)

- (1) Where a 704 PPC is conducted following initial training in a level A or B training program, the following flight checking is required within 30 days after the PPC in a synthetic flight training device, and may be performed concurrently with the flight training requirements on the aeroplane type in the applicable training program:
- (2) The following will be demonstrated:
 - (a) interior and exterior aeroplane pre-flight checks;
 - (b) ground handling for pilots-in-command;
 - (c) normal take-off, visual circuit where possible, and landing;
 - (d) a simulated engine inoperative approach and landing;
 - (e) simulated engine failure procedures during take-off and missed approach to be conducted at a safe altitude and at no less than $V_2 + 10$ airspeed'
 - (f) no electronic glide slope approach and landing; and
 - (g) a circling approach, if a circling approach could not be simulated in the synthetic training device.

REPEATED PPC ITEM

- (1) In general, a flight test exercise is performed once and assessed once. The following table outlines circumstances where a flight test exercise may be repeated and reassessed.
- (2) In all cases, the ACP will determine if circumstances warrant a flight test exercise being repeated.

| Circumstance | Environment | Notes |
|-----------------------------------|-----------------------|--|
| Safety Concern | Aircraft | A safety concern may be raised by the ACP, candidate, or another flight crew member that could preclude the performance and assessment of a flight check item. |
| ATC Instruction | Aircraft | ATC instructions may, on occasion not facilitate the accomplishment of a flight check item. Examples include VFR restrictions issued by ATC when simulating IFR flight profiles. |
| Misunderstood Request | Simulator or Aircraft | There are legitimate instances when candidates do not understand an ACP's request to perform a specific manoeuvre. |
| ACP Distraction | Simulator or Aircraft | Any condition whereby the ACP is distracted and the performance of a flight check item was not adequately observed. |
| Simulator or Aircraft Malfunction | Simulator or Aircraft | Any condition whereby the performance of a flight check item was not adequately observed due to a simulator or aircraft malfunction. |
| Performance Error | Simulator or Aircraft | ACPs may allow a candidate to repeat a maximum of one unsuccessful flight test exercise subject to all of the following: <ol style="list-style-type: none"> 1. no other sequence is rated a two (2) or a one (1); 2. the ACP feels that the risk of the individual repeating the error is insignificant; |

| Circumstance | Environment | Notes |
|--------------|-------------|---|
| | | <p>3. The error did not result in a crash (simulator only) or if allowed to continue, would not have resulted in the loss of control of the aircraft (aircraft only);</p> <p>4. In the opinion of the ACP, re-training the flight test exercise would not be beneficial; and</p> <p>5. Where a regulation was violated, there was no intent to do so.</p> <p>Application</p> <p>Without commenting on the error, the ACP must allow the candidate to finish the flight check to ascertain that no other flight test exercises are rated a two (2) or a one (1).</p> <p><i>Note: During a line check, the repeatable exercise should be completed as soon as practicable during the flight or series of flights.</i></p> <p>If considering the repeat of a flight test exercise, and without specifying what the error was, the ACP will ask the candidate to describe their performance on the exercise that was assigned a mark of one (1).</p> <p>If the candidate's explanation indicates satisfactory knowledge of the flight test exercise and admission of the error that occurred, the ACP may offer the candidate the opportunity to repeat the exercise.</p> <p>If it is not possible to repeat the sequence due to time constraints or other reasons, the ACP will apply the original mark of a one (1).</p> |

THE 4-POINT MARKING SCALE

- (1) The 4-Marking Scale is used during flight checks to document a candidate's performance. The scale includes both technical and non-technical skill elements. It is designed to measure the quality of performance rather than assigning a pass or fail grade to each flight test exercise.
- (2) Technical skill elements have formed the basis of flight checking for many years. Although traditionally considered stick and rudder skills, assessments of these skill elements have evolved with, for example the use of automation. Non-technical skill elements reflect more modern assessments of crew resource management within a flight check.
- (3) A comprehensive knowledge of the 4-Point Marking Scale's elements and grading matrix is essential so that marks and supportive comments can be derived accurately and withstand scrutiny. The 4-Point Marking Scale - Grading Matrix is provided to assist ACPs.

THE 4-POINT MARKING SCALE TECHNICAL AND NON-TECHNICAL SKILL ELEMENTS

- (1) The 4-Point Marking Scale contains the following technical skills elements:
 - (a) Aircraft Handling; and
 - (b) Technical Skills and Knowledge.
- (2) The 4-Point Marking Scale contains the following non-technical skill elements:
 - (a) Cooperation;

- (b) Leadership and Managerial Skills;
- (c) Situational Awareness; and
- (d) Decision Making.

RELATED NON-TECHNICAL CONCEPTS

- (1) The non-technical elements incorporated in the 4-Point Marking Scale are CRM based. Over time traditional human factors programs like CRM have evolved to highlight new areas of interest (e.g., communications and automation) and different approaches to human error management (e.g., threat and error management (TEM)).
- (2) Although not expressly identified within the 4-Point Marking Scale at this time, the following are related non-technical concepts:
 - (a) Communication;
 - (b) Automation; and
 - (c) Threat and Error Management.
- (3) While these related non-technical concepts are expressed somewhat within established non-technical skill elements, it is important that ACPs be familiar with these concepts and be able to observe and facilitate further discussions during debrief.

DEFINITION OF UNDESIRE AIRCRAFT STATE (UAS)

- (1) The term undesired aircraft state (UAS) is used extensively within the 4-Point Marking Scale. Understanding the precise definition of this term is critical to distinguishing between a minor, major and critical error.
- (2) A UAS is defined as “*an aircraft position, speed, attitude or configuration that results from a flight crew error, action or omission **which clearly reduces safety margins.***”

DEFINITIONS OF EFFECTIVE, ADEQUATE, POOR AND UNACCEPTABLE

- (1) The following adjectives are used extensively in the 4-Point Marking Scale. The following definitions of each word are provided:
 - (a) Effective - Successful in producing a desired or intended result.
 - (b) Acceptable - Satisfactory or allowable.
 - (c) Poor - Worse than is usual, expected or desirable.
 - (d) Unacceptable – Not satisfactory or allowable.

DEVIATIONS AND ERRORS

- (1) Deviations and errors are incorporated in the 4-Point Marking Scale.
- (2) Deviations
- (a) A deviation is a quantifiable measurement of a variation in precision from a specified flight test exercise tolerance.
- (b) Deviations are incorporated in the aircraft handling skill element of the 4-Point Marking Scale.

| Deviation Severity | Description |
|--------------------|---|
| Minor Deviation | <ul style="list-style-type: none"> A deviation that does not exceed a specified tolerance. |
| Major Deviation | <ul style="list-style-type: none"> A deviation that exceeds a specified tolerance by less than double; or Repeated minor deviations without achieving stability. |
| Critical Deviation | <ul style="list-style-type: none"> A deviation that exceeds a specified tolerance by more than double; Repeated major deviations without achieving stability; or Not identifying and correcting a major deviation. |

- (3) Errors
- (a) An error is a qualitative assessment of **an action or inaction by a flight crew** that leads to a variation from flight crew intentions or expectations.
- (b) Errors are incorporated in the technical skills and knowledge element of the 4-Point Marking Scale.

| Error Severity | Description |
|----------------|--|
| Minor Error | <ul style="list-style-type: none"> An action or inaction that is inconsequential to the completion of a task, procedure, or manoeuvre; and Undesired Aircraft State (UAS) did not occur. |
| Major Error | <ul style="list-style-type: none"> An action or inaction that is consequential to the completion of a task, procedure, or manoeuvre; and Undesired Aircraft State (UAS) did not occur. |
| Critical Error | <ul style="list-style-type: none"> An action or inaction that is consequential to the completion of a task, procedure, or manoeuvre; and Undesired Aircraft State (UAS) occurred. |

4-POINT MARKING SCALE – GRADING MATRIX

| | | Marks | | | |
|------------------------------|----------------------------------|---|---|---|---|
| | | 4 | 3 | 2 | 1 |
| Technical Skill Elements | Aircraft Handling | <ul style="list-style-type: none"> • No deviation • Effective quality and accuracy • Regulatory and aircraft limitations compliance • Safety of flight assured | <ul style="list-style-type: none"> • Minor deviation • Acceptable quality and accuracy • Regulatory and aircraft limitations compliance • Safety of flight maintained | <ul style="list-style-type: none"> • Major deviation • Poor quality and accuracy • Regulatory and aircraft limitations compliance • Safety of flight reduced | <ul style="list-style-type: none"> • Critical deviation • Unacceptable quality and accuracy • Regulatory or aircraft limitations non-compliance • Safety of flight compromised |
| | Technical Skills and Knowledge | <ul style="list-style-type: none"> • No error • Effective practical understanding • Effective following SOPs, rules and regulations | <ul style="list-style-type: none"> • Minor error • Acceptable practical understanding • Acceptable following SOPs, rules and regulations | <ul style="list-style-type: none"> • Major error • Poor practical understanding • Poor following SOPs, rules and regulations | <ul style="list-style-type: none"> • Critical error • Unacceptable practical understanding • Unacceptable following SOPs, rules and regulations |
| Non-Technical Skill Elements | Cooperation | <ul style="list-style-type: none"> • Effective team building and maintaining • Effective consideration of others • Effective support of others • Effective solving conflicts | <ul style="list-style-type: none"> • Acceptable team building and maintaining • Acceptable consideration of others • Acceptable support of others • Acceptable solving conflicts | <ul style="list-style-type: none"> • Poor team building and maintaining • Poor consideration of others • Poor support of others • Poor solving conflicts | <ul style="list-style-type: none"> • Unacceptable team building and maintaining • Unacceptable consideration of others • Unacceptable support of others • Unacceptable solving conflicts |
| | Leadership and Managerial Skills | <ul style="list-style-type: none"> • Effective use of authority and assertiveness • Effective providing and maintaining standards • Effective planning and coordination • Effective workload management | <ul style="list-style-type: none"> • Acceptable use of authority and assertiveness • Acceptable providing and maintaining standards • Acceptable planning and coordination • Acceptable workload management | <ul style="list-style-type: none"> • Poor use of authority and assertiveness • Poor providing and maintaining standards • Poor planning and coordination • Poor workload management | <ul style="list-style-type: none"> • Unacceptable use of authority and assertiveness • Unacceptable providing and maintaining standards • Unacceptable planning and coordination • Unacceptable workload management |
| | Situational Awareness | <ul style="list-style-type: none"> • Effective system awareness • Effective environmental awareness • Effective awareness of time and anticipation of future events | <ul style="list-style-type: none"> • Acceptable system awareness • Acceptable environmental awareness • Acceptable awareness of time and anticipation of future events | <ul style="list-style-type: none"> • Poor system awareness • Poor environmental awareness • Poor awareness of time and anticipation of future events | <ul style="list-style-type: none"> • Unacceptable system awareness • Unacceptable environmental awareness • Unacceptable awareness of time and anticipation of future events |
| | Decision-Making | <ul style="list-style-type: none"> • Effective problem definition / diagnosis • Effective option generation • Effective risk assessment & option selection • Effective outcome review | <ul style="list-style-type: none"> • Acceptable problem definition / diagnosis • Acceptable option generation • Acceptable risk assessment & option selection • Acceptable outcome review | <ul style="list-style-type: none"> • Poor problem definition / diagnosis • Poor option generation • Poor risk assessment & option selection • Poor outcome review | <ul style="list-style-type: none"> • Unacceptable problem definition / diagnosis • Unacceptable option generation • Unacceptable risk assessment & option selection • Unacceptable outcome review |

UNSUCCESSFUL FLIGHT CHECK ATTEMPT

- (1) A flight check will be assessed as unsuccessful under one of following conditions:
 - (a) Second-In-Command
 - (i) one flight check item assessed a mark of one (1); or
 - (ii) five flight check items assessed a mark of two (2).
 - (b) Pilot-In-Command
 - (i) one flight check item assessed a mark of one (1); or
 - (ii) three flight check items assessed a mark of two (2).
 - (c) Cruise Relief Pilot
 - (i) one flight check item assessed a mark of one (1); or
 - (ii) three flight check items assessed a mark of two (2).
- (2) When an ACP decides that flight check will be assessed as an unsuccessful attempt, the flight check must be terminated immediately.
- (3) When two candidates are paired during a PPC and the first is unsuccessful, that individual cannot be used as a seat partner for the second portion of the same PPC or any other PPC until a successful attempt is achieved.

COMPLAINTS CONCERNING AN ACP'S CONDUCT

- (1) An operator and/or a flight check candidate has recourse to file a complaint concerning an ACP's conduct that displays inappropriate or unprofessional behaviour. Complaints should be forwarded to the Transport Canada region responsible for the ACP.
- (2) The Transport Canada regional office will review the nature of the complaint and determine if remedial action is required. Transport Canada could respond by dismissing the complaint or coordinating a complete re-test without prejudice to the candidate's record by another ACP.
- (3) All complaints will be reviewed carefully, without bias and in the interests of the ACP, operator and/or flight check candidate.

RIGHTS OF APPEAL - PPC

- (1) In the event of an unsuccessful PPC attempt, the candidate(s) will receive a "Notice of Refusal to Issue or Amend a Canadian Aviation Document" letter from Transport Canada.
- (2) Candidate(s) have the right to request a review of the assessment to the Transportation Appeal Tribunal of Canada (TATC). A date will be specified in the letter from Transport Canada when an application for review must be submitted by.
- (3) If not currently pursuing a TATC review, a candidate may request a review of the assessment be conducted by Transport Canada (i.e., the issuing authority to which the ACP is accountable to (e.g., TC National Operations – Certification and Quality Assurance)). In the event that the candidate is not satisfied with the review, the option of requesting a review by the TATC remains available.
- (4) Additional information is available on the TATC website.

PPC RESULTS

- (1) ACPs may provide a copy of the *Flight Test Report - Pilot Proficiency Check* form (Form 26-0249 or 26-0279) to the candidate or upon request to other appropriate parties such as the operator, training organization or chief pilot.

FLIGHT TEST EXERCISES

1. TECHNICAL KNOWLEDGE

Aim

To demonstrate a practical knowledge of selected systems, components, normal, abnormal and emergency procedures and operate aircraft systems in accordance with the POH/AFM.

Description

The ACP will conduct an equipment examination requiring the candidate to demonstrate a practical knowledge of the airframe, engine, major components and systems including the normal, abnormal, alternate and emergency operating procedures and limitations relating thereto.

For 704 and 705 PPC's the equipment examination is optional when the pilot's training record contains a valid written examination, from initial or annual training.

Performance Criteria

Assessment the candidate's ability to explain the operation of the following systems:

- a. landing gear;
- b. powerplant;
- c. propellers;
- d. fuel system;
- e. oil system;
- f. hydraulic system;
- g. electrical system;
- h. environmental systems;
- i. avionics and communications (autopilot; flight director; Electronic Flight Indicating Systems (EFIS); Flight Management System(s) (FMS); Long Range Navigation (LORAN) systems; Doppler Radar; Inertial Navigation Systems (INS); Global Positioning System (GPS/DGPS/WGPS); VOR, NDB, ILS/MLS, RNAV systems and components; indicating devices; transponder; and emergency locator transmitter);
- j. ice protection;
- k. crewmember and passenger equipment (oxygen system, survival gear, emergency exits, evacuation procedures and crew duties, and quick donning oxygen mask for crewmembers and passengers);
- l. flight controls (ailerons, elevator(s), rudder(s), winglets, canards, control tabs, balance tabs, stabilizer, flaps, spoilers, leading edge flaps/slats and trim systems);
- m. pitot-static system with associated instruments and the power source for the flight instruments; and
- n. systems and components listed above with regard to the POH or AFM, the Minimum Equipment List (MEL), if appropriate, and the Operations Specifications, if applicable.

2. FLIGHT PLANNING (FLP)

Aim

To plan a flight utilizing performance charts, weight and balance calculations, conforming to the VFR or IFR flight rules as applicable and retrieving and interpreting aviation weather information necessary for the safe conduct of the flight.

Description

The ACP will conduct a flight planning practical examination requiring the candidate to demonstrate a knowledge of the air operators approved standard operating procedures and the Aeroplane Flight Manual including aeroplane and runway performance charts where applicable, loading, weight and balance procedures and Flight Manual Supplements.

For 704 and 705 PPC's the flight planning examination is optional when the pilot's training record contains a valid written examination, from initial or annual training.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate a practical knowledge of performance and limitations, including a the adverse effects of exceeding any limitation;
- b. demonstrate proficient use of (as appropriate to the aeroplane) performance charts, tables, graphs, or other data relating to items, such as:
 1. accelerate-stop distance
 2. accelerate-go distance
 3. takeoff performance—all engines, engine(s) operating
 4. climb performance including segmented climb performance; with all engines operating —with one or more engine(s) inoperative, and with other engine malfunctions as may be appropriate
 5. service ceiling—all engines, engines(s) inoperative, including drift down, if appropriate
 6. cruise performance
 7. fuel consumption, range, and endurance
 8. descent performance
 9. go-around from rejected landings
 10. other performance data (appropriate to the aeroplane)
- c. describe (as appropriate to the aeroplane) the airspeeds used during specific phases of flight;
- d. describe the effects of meteorological conditions upon performance characteristics and correctly applies these factors to a specific chart, table, graph, or other performance data;
- e. compute the centre-of-gravity location for a specific load condition (as specified by the examiner), including adding, removing, or shifting weight;
- f. determine if the computed centre-of-gravity is within the forward and aft centre-of-gravity limits, and that lateral fuel balance is within limits for takeoff and landing for the proposed flight;
- g. demonstrate acceptable planning and knowledge of procedures in applying operational factors affecting aeroplane performance;
- h. select an appropriate route, altitude and alternate;
- i. locate and apply information essential to the flight;
- j. obtain and correctly interpret applicable NOTAM information;
- k. calculate the estimated time enroute and total fuel requirement based on factors such as power settings, operating altitude or flight level, wind and fuel reserve requirements;

- l. determine that the required performance for the planned flight is within the aircraft's capability and operating limitations;
- m. make a competent "GO/NO-GO" decision based on available information for the planned flight;
- n. complete a flight plan in a manner that reflects the conditions of the proposed flight;
- o. demonstrate sufficient practical operational knowledge of the regulatory requirements relating to instrument and visual flying, as applicable; and
- p. retrieve and interpret items such as weather reports and forecasts; pilot and radar reports; surface analysis charts; significant weather prognostics; winds and temperatures aloft; freezing level charts, NOTAMS and SIGMETs.

3. PRE-FLIGHT (PRF)

Aim

To systematically complete internal and external checks in accordance with the POH/AFM and SOP's to ensure that the aeroplane is ready for the intended flight. The candidate will also demonstrate knowledge of how to deal with irregularities, if found.

Description

The candidate will determine that the aeroplane is ready for the intended flight. The pre-flight aeroplane inspection will include a visual inspection of the exterior and interior of the aeroplane, locating each required item and explaining the purpose of the inspection in accordance with the POH/AFM and SOP's.

The candidate will carry out in accordance with the POH/AFM a visual check for fuel quantity, proper grade of fuel, fuel contamination and oil levels. If, due to aircraft design, the POH/AFM does not prescribe a visual check of fuel levels, the candidate will use fuel chits, fuel logs or other credible procedures to confirm the amount of fuel on board the aircraft.

At the request of the ACP, the candidate will conduct an oral passenger safety briefing.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate an adequate knowledge of the pre-flight inspection procedures, while explaining briefly the purpose of inspecting the items, which must be checked, how to detect possible defects and the corrective action to take;
- b. demonstrate adequate knowledge of the operational status of the aeroplane by locating and explaining the significance and importance of related documents, such as airworthiness and registration certificates, operating limitations, handbooks, and manuals, minimum equipment list (MEL) (if appropriate), weight and balance data and maintenance requirements, tests, and appropriate records applicable to the proposed flight or operation; and maintenance that may be performed by the pilot or other designated crewmember;
- c. use the approved checklist to inspect the aeroplane externally and internally;
- d. use the challenge-and-response (or other approved) method with the other crewmember(s), where applicable to accomplish the checklist procedures;
- e. verify the aeroplane is safe for flight by emphasizing (as appropriate) the need to look at and explain the purpose of inspecting items, such as:
 1. powerplant, including controls and indicators
 2. fuel quantity, grade, type, contamination safeguards, and servicing procedures
 3. oil quantity, grade, and type
 4. hydraulic fluid quantity, grade, type, and servicing procedures
 5. oxygen quantity, pressures, servicing procedures, and associated systems and equipment for crew and passengers
 6. hull, landing gear, float devices, brakes, and steering system
 7. tires for condition, inflation, and correct mounting, where applicable
 8. fire protection/detection systems for proper operation, servicing, pressures, and discharge indications
 9. pneumatic system pressures and servicing
 10. ground environmental systems for proper servicing and operation
 11. auxiliary power unit (APU) for servicing and operation
 12. flight control systems including trim, spoilers, and leading/trailing edge
 13. anti-ice, deice systems, ice warning systems, servicing, and operation

- f. coordinate with ground crew and ensure adequate clearance prior to moving any devices, such as door, hatches and flight control surfaces;
- g. comply with the provisions of the appropriate Operations Specifications, if applicable, as they pertain to the particular aeroplane and operation;
- h. demonstrate proper operation of all applicable aeroplane systems;
- i. note any discrepancies, determine if the aeroplane is airworthy and safe for flight, or takes the proper corrective action with respect to unsatisfactory conditions identified; and
- j. check the general area around the aeroplane for hazards to the safety of the aeroplane and personnel.

4. ENGINE START/DEPART (ESD)

Aim

To complete the correct engine start procedures including the use of an auxiliary power unit (APU) or external power source under various atmospheric conditions, conducting warm-up, run-up and system checks, recognize normal and abnormal situations, and take proper action in the event of a malfunction.

Description

The candidate will demonstrate the proper use of the pre-start, start and pre-taxi check lists and check the appropriate radio communications, navigation and electronic equipment and selection of the appropriate communications and navigation frequencies prior to flight.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. ensure ground safety procedures are followed during the before-start, start, and after-start phases;
- b. ensure the appropriate use of ground crew personnel during the start procedures;
- c. perform all items of the start procedures by systematically following the approved checklist items for the before-start, start, and after-start phases;
- d. demonstrate sound judgment and operating practices in those instances where specific instructions or checklist items are not published;
- e. use the challenge-and-response (or other approved) method with the other crewmember(s), where applicable, to accomplish the checklist procedures;
- f. coordinate with ground crew and ensures adequate clearance prior to moving any devices, such as door, hatches, and flight control surfaces;
- g. demonstrate adequate knowledge of the pre-takeoff checks by stating the reason for checking the items outlined on the approved checklist and explaining how to detect possible malfunctions;
- h. divide attention properly inside and outside cockpit;
- i. ensure that all systems are within their normal operating range prior to beginning, during the performance of, and at the completion of those checks required by the approved checklist;
- j. explain, as may be requested by the ACP, any normal or abnormal system operating characteristic or limitation; and the corrective action for a specific malfunction;
- k. determine if the aeroplane is safe for the proposed flight or requires maintenance;
- l. determine the aeroplane's takeoff performance, considering such factors as wind, density altitude, weight, temperature, pressure altitude, and runway condition and length;
- m. determine airspeeds/V-speeds and properly sets all instrument references, flight director and autopilot controls, and navigation and communications equipment;
- n. review procedures for emergency and abnormal situations, which may be encountered during takeoff, and states the corrective action required of the pilot in command and other concerned crewmembers;
- o. perform an avionics and navigation equipment cockpit check; and
- p. obtain and correctly interpret the takeoff and departure clearance as issued by ATC.

5. TAXI-OUT

Aim

To manoeuvre the aeroplane safely on the ground and avoid unnecessary interference with the movement of other traffic as appropriate to the aeroplane including pushback or power-back, as applicable.

Description

The candidate will taxi the aircraft to and from the runway in use and as otherwise required during the PPC. While taxiing, the candidate will follow taxiing procedures including, where appropriate, sailing and docking. In addition, the taxi check will include the use of the taxiing checklist, taxiing in compliance with clearances and instructions issued by the appropriate air traffic control unit or by the ACP. Where a second-in-command undergoes the pilot proficiency check, outlined above, evaluate taxiing to the extent practicable from the second-in-command position.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of safe taxi procedures (as appropriate to the aeroplane including push-back or powerback, as may be applicable);
- b. demonstrate proficiency by maintaining correct and positive aeroplane control;
- c. maintain proper spacing on other aircraft, obstructions, and persons;
- d. accomplish the applicable checklist items and perform recommended procedures;
- e. maintain desired track and speed;
- f. perform an instrument check;
- g. comply with instructions/clearances issued by ATC (or the examiner simulating ATC);
- h. observe runway hold lines, localizer and glide slope critical areas and other surface control markings and lighting; and
- i. maintain constant vigilance and aeroplane control during taxi operation to prevent runway incursion.

6. TAKE-OFF (TOF)

Aim

To take off safely using the correct technique and procedure for the actual wind conditions, runway surface and length, and can assess the possibility of further conditions such as wind shear and wake turbulence.

Description

The candidate will demonstrate a normal takeoff performed in accordance with the Airplane Flight Manual. The candidate will demonstrate an instrument take-off in the same manner as the normal take-off with simulated instrument conditions established at or after reaching an altitude of 200 feet above the airport elevation. The instrument take off is not required where the Air Operator's Certificate authorizes operations under day VFR only, or the air operator assigns the pilot to day VFR flight only. Where practicable, the candidate will demonstrate, one crosswind take-off performed in accordance with the AFM/AOM where applicable.

For PPC's conducted in a simulator, the candidate will demonstrate a take-off in a minimum 10 kts crosswind in addition to an instrument take-off at the minimum visibility approved for the operator.

Where an operator has RVR 1200 or RVR 600 take off limits authority, the candidate will demonstrate one such take off to the lowest limit as appropriate to his flight crew position.

Note: The ACP may combine any or all of these take-offs.

702 and 703 PPC's the candidate will demonstrate a simulated engine failure after take-off as follows:

- a. where performed in a visual synthetic training device, the simulated failure of the critical engine will occur at the take-off safety speed plus 10 kts; or
- b. where performed in an aeroplane in flight, at a safe altitude as close to the take-off safety speed plus 10 kts as is safe and appropriate to the aeroplane type under the prevailing conditions.

For 704 and 705 PPC's conducted in a simulator, the candidate will demonstrate a take-off with failure of the critical engine at a speed greater than V1 and at an altitude of less than 50 feet AGL; or at a speed as close as possible to, but greater than V1 when V1 and V2, or V1 and Vr are identical.

Performance Criteria Take off

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of normal and crosswind takeoffs and climbs including (as appropriate to the aeroplane) airspeeds, configurations, and emergency/abnormal procedures;
- b. note any surface conditions, obstructions, or other hazards that might hinder a safe takeoff;
- c. verify and correctly apply correction for the existing wind component to the takeoff performance;
- d. complete required checks prior to starting takeoff to verify the expected powerplant performance. Performs all required pre-takeoff checks as required by the appropriate checklist items;
- e. aligns the aeroplane on the runway centreline;
- f. apply the controls correctly to maintain longitudinal alignment on the centreline of the runway prior to initiating and during the takeoff;
- g. adjusts the powerplant controls as recommended by the POH/AFM or other approved guidance for the existing conditions;
- h. monitor powerplant controls, settings, and instruments during takeoff to ensure all predetermined parameters are maintained;
- i. adjusts the controls to attain the desired pitch attitude at the predetermined airspeed/V-speed to attain the desired performance for the particular takeoff segment;
- j. perform the required pitch changes and, as appropriate, performs or calls for and verifies the accomplishment of, gear and flap retractions, power adjustments, and other required pilot-related activities at the required airspeed/Vspeeds within the tolerances established in the POH or AFM;
- k. use the applicable noise abatement and wake turbulence avoidance procedures, as required;

- l. accomplish or calls for and verifies the accomplishment of the appropriate checklist items;
- m. maintain the appropriate climb segment airspeed/Vspeeds; and
- n. maintain the desired heading within $\pm 10^\circ$ and the desired airspeed/V-speed within +10/-5 knots or the appropriate Vspeed range.

Performance Criteria Engine Failure After Take-Off (Multi-Engine)

Base the assessment on the candidate's ability to:

- a. recognize the simulated engine failure promptly;
- b. control the aeroplane;
- c. set the power controls and reduce drag by using control application, in the proper sequence;
- d. identify and verify the inoperative engine;
- e. bank toward the operating engine, as recommended for best performance;
- f. maintain directional control within ± 10 degrees of assigned heading.
- g. establish a positive rate of climb, if the aeroplane is capable;
- h. accelerate to and maintain one engine inoperative required airspeed/Vspeeds and trim the aeroplane, as required;
- i. continue the overshoot towards a specified altitude;
- j. locate the necessary controls and switches to carry out and complete the emergency procedures in accordance with the approved emergency procedures checklist (Engine Failure during Takeoff or Overshoot):
 - 1. complete prescribed engine failure vital action checks from memory;
 - 2. complete the emergency drill, in accordance with the emergency checklist; and
 - 3. complete engine shutdown checks and other necessary checks in accordance with the appropriate emergency checklist(s).
- k. monitor the operating engine and take appropriate action to keep the operating engine parameters within limitations.

7. REJECTED TAKE-OFF (RTO)

Aim

To recognize an abnormal situation necessitating a rejected takeoff and to carry out an appropriate procedure in accordance with the AFM/POH and/or SOP's.

Description

When performed in a simulator, the candidate will demonstrate a rejected take-off before reaching lift-off speed or if conducted in the aircraft, the candidate will verbally explain this manoeuvre during the briefing. . Where an operator has RVR 1200 or RVR 600 take off limits authority, the candidate will demonstrate one such rejected take off to the lowest limit as appropriate to his flight crew position.

For 704 and 705 PPC's conducted in a simulator, the candidate will demonstrate a rejected take-off from a speed of not less than 90% of the calculated V1 or less if appropriate to the aeroplane type.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of the technique and procedure for accomplishing a rejected takeoff after powerplant/system(s) failure/warnings, including related safety factors;
- b. take into account, prior to beginning the takeoff, operational factors which could affect the manoeuvre, such as Takeoff Warning Inhibit Systems or other aeroplane characteristics, runway length, surface conditions, wind, obstructions that could affect takeoff performance and could adversely affect safety;
- c. align the aeroplane on the runway centreline;
- d. perform all required pre-takeoff checks as required by the appropriate checklist items;
- e. adjust the powerplant controls as recommended for the existing conditions;
- f. apply the controls correctly to maintain longitudinal alignment on the centreline of the runway;
- g. abort the takeoff if, in a single-engine aeroplane the powerplant failure occurs prior to becoming airborne, or in a multiengine aeroplane, the powerplant failure occurs at a point during the takeoff where the abort procedure can be initiated and the aeroplane can be safely stopped on the remaining runway/stopway. If a flight simulator is not used, the powerplant failure will be explained by the candidate prior to the flight;
- h. reduce the power smoothly and promptly, if appropriate to the aeroplane, when powerplant failure is recognized; and
- i. use spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, maintaining positive control in such a manner as to bring the aeroplane to a safe stop. Accomplishes the appropriate powerplant failure or other procedures and/or checklists as set forth in the POH or AFM or SOP.

8-9. INITIAL CLIMB (ICL) / ENROUTE CLIMB (ECL)

Aim

To comply with initial climb departure procedures and enroute departure procedures as cleared.

Description

The candidate will complete the initial climb procedures, the departure procedures and establish the aircraft on the enroute course, as cleared, in accordance with the Visual or Instrument Flight Rules, as applicable. In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria Initial Climb

Base the assessment on the candidate's ability to:

- a. transition smoothly and accurately from visual meteorological conditions to actual or simulated instrument meteorological conditions, where applicable;
- b. monitor powerplant controls, settings, and instruments during the initial climb to ensure all predetermined parameters are maintained;
- c. adjusts the controls to attain the desired pitch attitude at the predetermined airspeed/V-speed to attain the desired performance for the particular takeoff and climb segment;
- d. perform the required pitch changes and, as appropriate, performs or calls for and verifies the accomplishment of, gear and flap retractions, power adjustments, and other required pilot-related activities at the required airspeed/Vspeeds within the tolerances established in the POH or AFM and SOP's;
- e. use the applicable noise abatement and wake turbulence avoidance procedures, as required;
- f. accomplish or call for and verify the accomplishment of the appropriate checklist items;
- g. maintain the desired heading within $\pm 10^\circ$ and the desired airspeed/V-speed within $+10/-5$ knots or the appropriate Vspeed range; and
- h. comply with ATC clearances and instructions issued by ATC (or the examiner simulating ATC).

Performance Criteria Enroute Climb

Base the assessment on the candidate's ability to:

- a. establish communications with ATC, using proper phraseology;
- b. select and identify use the appropriate communications and navigation systems associated with the proposed departure phase;
- c. perform the aircraft checklist items relative to the phase of flight;
- d. intercept, in a timely manner, all tracks, radials and bearings appropriate to the procedure, route or clearance;
- e. adhere to departure, noise abatement and transition procedures or ATC instructions;
- f. comply, in a timely manner, with all instructions and airspace restrictions;
- g. maintain proper aircraft control and flight within operating configurations and limitations;
- h. maintain assigned headings within ± 10 degrees;
- i. maintain assigned tracks and bearings within ± 10 degrees;
- j. maintain altitude within ± 100 feet;
- k. exhibit adequate knowledge of two-way radio communications failure procedures; and
- l. conduct the departure phase to a point where, in the opinion of the examiner, the transition to the en route environment is complete.

10. CRUISE (CRZ)

Aim

To establish the aeroplane in cruising flight at the pre-planned power settings in accordance with the POH/AFM and to determine the candidate's ability to comply with enroute procedures as cleared.

Description

The candidate will establish the aeroplane in cruising flight in accordance with the performance charts in the POH/AFM, placards displayed in the aeroplane or any other means authorized by the manufacturer. In addition, the candidate will maintain the aircraft on the enroute course and comply with enroute procedures, as cleared, in accordance with Visual or Instrument Flight Rules, as applicable. The candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. select and use the appropriate communications frequencies;
- b. select and identify the navigation aids associated with the proposed enroute phase;
- c. perform the aircraft checklist items relative to the phase of flight;
- d. intercept, in a timely manner, all tracks, radials and bearings appropriate to the route or clearance;
- e. adhere to the enroute procedures;
- f. maintain proper aircraft control and flight within operating limitations;
- g. maintain assigned heading, tracks or bearings within ± 10 degrees, and altitude within ± 100 feet;
- h. set the power/throttle(s), propeller and mixture controls at the pre-planned power setting, as recommended by the POH/AFM;
- i. synchronize propellers;
- j. apply any additional measures recommended by the manufacturer with respect to aircraft configuration or other considerations; and
- k. confirm cruise performance and demonstrate good decision-making to deal with the consequences of variances from the expected performance (ETA revision, fuel management).

11. STEEP TURNS

Aim

To perform level and coordinated steep turns.

Description

At an operationally safe altitude recommended by the manufacturer, training syllabus, or other training directive, but in no case lower than 3,000 feet AGL, the candidate will execute at least one steep turn in each direction with a bank angle of 45° and a change in heading of at least 180° but not more than 360°. The candidate will specify the selected altitude, airspeed and initial heading before entering the turn.

For 704 and 705 PPC's conducted in a simulator, ACP need not evaluate steep turns are when the PPC follows either a LOFT scenario, a scripted PPC or is for a fly-by wire aeroplane; and

- a. for an initial PPC on aeroplane type, steep turns were satisfactorily demonstrated during initial training;
- b. for semi-annual or an annual PPC:
 1. steep turns that are part of the applicable annual training syllabus were satisfactorily demonstrated during this training; or
 2. steep turns are not part of the applicable annual training syllabus.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. where applicable, divide attention appropriately between outside visual references and instrument indications;
- b. roll into and out of turns, using smooth and coordinated pitch, bank and power control to maintain the specified altitude within ± 100 feet and the desired airspeed within ± 10 knots;
- c. establish the recommended entry airspeed;
- d. maintain the bank angle of 45° within $\pm 10^\circ$ while in smooth stabilized flight;
- e. after 180° of turn, roll out of the turn at approximately the same rate used to roll into the turn and reverse the direction of turn and repeat the manoeuvre in the opposite direction;
- f. roll out of the turn at the reversal heading and the entry heading within $\pm 10^\circ$; and
- g. avoid any indication of an approaching stall, abnormal flight attitude, or exceeding any structural or operating limitation during any part of the manoeuvre.

12. APPROACHES TO STALL

Aim

To determine the candidate's ability to recognize and recover promptly and correctly from an approach to a stall in various configurations, and avoid a stall.

Description

For the purpose of this manoeuvre, an approach to a stall may be identified at:

- the first indication of aerodynamic buffeting, a lack of pitch authority, a lack of roll control, an inability to arrest a descent rate; and/or
- the activation of stall warning devices, stick shaker and/or stick pusher devices (where installed).

When performed in an aeroplane, approaches to stall should take place with a clearly visible horizon during daylight conditions and with sufficient clearance from the ground and/or cloud. Approaches to stalls should be conducted at an altitude of at least 5000 feet AGL, and if above cloud at an altitude of at least 2000 feet above the cloud tops, or by using increased clearance requirements where specified by aircraft manufacturers or air operators.

Initial and upgrade PPCs require the following approaches to the stall:

- one in the *take-off* configuration, except where a zero-flap take-off configuration is normally used in that model and type of aeroplane;
- one in a *clean* configuration, preferably at a medium or high altitude; and
- one in a *landing* configuration.

For PPCs conducted in a synthetic flight training device, one of the approaches to stall will be performed while in a turn with a bank angle of between 15° and 30°.

For Subparts 704 and 705 PPCs conducted in a flight training device, ACPs need not evaluate approach to stalls when the PPC follows either a LOFT scenario (in applicable cases under Subpart 705 only), a scripted PPC or plan of action or involves a fly-by wire aeroplane; and

- for an initial PPC on an aeroplane type, approaches to stalls have been satisfactorily demonstrated during initial training;
- for semi-annual or an annual PPC:
 1. approaches to stalls required in the applicable annual training syllabus were satisfactorily demonstrated during this training; or
 2. approaches to stalls are not part of the applicable annual training syllabus.

Performance Criteria

Assessment of the candidate's ability to:

1. recognize the first indication of an approach to a stall (as listed in the Description section above);
2. disconnect autopilot and autothrottle (if installed and engaged);
3. apply nose down pitch control until indications of stall and/or stall warning significantly diminish or disappear, and trim as needed;
4. roll to wings level using ailerons and apply rudder only as necessary to control sideslip;
5. add or adjust power/thrust as needed;
6. carry out configuration changes as recommended and ensure that speed brakes/spoilers (if installed) are retracted;
7. recover to a safe airspeed and stabilized flight; and
8. ensure that the aeroplane is in a suitable configuration by checking pertinent items from an appropriate checklist."

13. HOLDING

Aim

To establish the aircraft in a holding pattern using an actual or simulated ATC clearance.

Description

In actual or simulated instrument conditions, the candidate must demonstrate adequate knowledge of a holding procedure for a standard or non-standard, published or non-published holding pattern. If appropriate, the candidate must demonstrate adequate knowledge of holding endurance, including, but not necessarily limited to, fuel on board, fuel flow while holding, fuel required to alternate, etc.

Based on an actual or simulated clearance, the candidate will select a suitable entry procedure, enter the hold and establish the aircraft in the holding pattern. Also, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. change to the recommended holding airspeed appropriate for the aeroplane and holding altitude, so as to cross the holding fix at or below maximum holding airspeed;
- b. recognize arrival at the clearance limit or holding fix and initiate entry into the holding pattern;
- c. follow appropriate entry procedures for a standard, nonstandard, published, or non-published holding pattern;
- d. report entering the hold;
- e. comply with ATC reporting requirements;
- f. use the proper timing criteria required by the holding altitude and ATC or examiner's instructions;
- g. comply with the holding pattern leg length when a DME distance is specified;
- h. use the proper wind-drift correction techniques to accurately maintain the desired radial, track, courses, or bearing;
- i. arrive over the holding fix as close as possible to the "expect further clearance" time;
- j. maintain the appropriate airspeed/V-speed within ± 10 knots, altitude within ± 100 feet, headings/tracks/course within $\pm 10^\circ$ or within $\frac{1}{2}$ scale deflection of the course deviation indicator, as applicable and accurately tracks radials, courses, and bearings; and
- k. maintain proper aircraft control and flight within operating configurations and limitations while in the hold.

14. DESCENT (DST)

Aim

To comply with visual or instrument arrival procedures, as applicable.

Description

Descent begins when the crew departs the cruise altitude for the purpose of an approach at a **particular destination** and ends when the crew initiates changes in aircraft configuration and/or speeds to facilitate a landing on a particular runway. It also may end by the crew initiating an "En Route Climb" or "cruise" phase.

The candidate will complete the arrival procedures, as cleared, in accordance with Instrument Flight Rules or Visual Flight Rules, as applicable. In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of En Route Low and High Altitude Charts, STAR's/FMS Procedures, Instrument Approach Procedure Charts, VFR Charts, as applicable, and related pilot and controller responsibilities;
- b. select and identify the navigation aids associated with the proposed arrival phase;
- c. select and correctly identify all instrument references, flight director and autopilot controls, and navigation and communications equipment associated with the arrival;
- d. perform the aeroplane checklist items appropriate to the arrival;
- e. select and establish communications with ATC, using proper phraseology;
- f. comply, in a timely manner, with all ATC clearances, instructions, and restrictions;
- g. demonstrate adequate knowledge of two-way communications failure procedures;
- h. intercept, in a timely manner, all tracks, radials and bearings appropriate to the procedure, route, ATC clearance, or as directed by the ACP;
- i. correctly adhere to visual or instrument arrival procedures;
- j. adhere to airspeed restrictions and adjustments required by regulations, ATC, the POH/AFM, SOP's or the ACP;
- k. establish, where appropriate, a rate of descent consistent with the aeroplane operating characteristics and safety;
- l. maintain the appropriate airspeed/V-speed within ± 10 knots, but not less than VREF, if applicable; heading $\pm 10^\circ$; altitude within ± 100 feet; and accurately tracks radials, courses, and bearings;
- m. complies with the provisions of the Profile Descent, STAR, and other arrival procedures, as appropriate; and
- n. maintain proper aircraft control and flight within operating limitations.

15-16. APPROACH (APR)

Aim

To fly a successful stabilized precision and non-precision instrument approach in accordance with the published instrument approach procedure.

Description

The candidate will demonstrate at least two instrument approaches performed in accordance with procedures and limitations in the Canada Air Pilot or in the equivalent foreign publications, or approved company approach procedure for the approach facility used. Where practicable the candidate will fly one precision approach (3D) and one a non-precision approach (2D); and conditions permitting, where authorised in SOPs a circling approach. For multiengine aeroplanes PPCs, complete at least one approach with a simulated failure of one powerplant. The simulated powerplant failure should occur before initiating the final approach segment and must continue to touchdown or throughout the missed approach procedure.

For 704 and 705 PPCs conducted in a simulator, one of the approaches will be a precision (3D), and one a non-precision (2D) approach. In addition, where authorized to conduct circling approaches in their COM, the flight crew will demonstrated during an initial qualification check and annually thereafter one approach and manoeuvre to land using a scene approved for circling. The candidates will demonstrate the proper programming and use of Flight Management Systems as applicable.

Note: On an Initial Instrument Rating flight test, a precision approach is mandatory.

Note: The candidate may fly at altitudes higher than the applicable minimum altitudes depicted on the approach chart, but descent during the final segment of the approach should result in reaching the MDA at a distance from the MAP approximately equal to the recommended minimum visibility. The minimum altitudes depicted on the approach chart represent hard approach floor heights above terrain or other obstacles determined during the approach design process. Descent below these altitudes compromises the approach design safety factor.

Note: In accordance with the exemption to CAR 602.128(2)(b), a pilot may descend below the MDA which is likely to occur during a missed approach following a stabilized constant descent angle non precision approach. This exemption is subject to the following conditions:

- 1. the pilot-in-command will conduct a final approach with a planned stabilized constant descent angle (SCDA) from the final approach fix to a normal landing runway threshold crossing height of 50 feet;*
- 2. the pilot-in-command will initiate a missed approach upon reaching the earliest of either the Decision Altitude (Minimum Descent Altitude), or the missed approach point, or the required visual reference necessary to continue to land has not been established;*
- 3. a SCDA approach will not be conducted on procedures requiring remote altimeter setting correction;*
- 4. the instrument approach procedure flown is to straight-in minima, and the final approach course will not be more than 15 degrees from runway centreline; and*
- 5. the pilot-in-command and the air operator will maintain compliance with the schedule attached to the exemption which pertains to a training program, Standard Operating Procedures and Required Aircraft Equipment.*

Non Precision Instrument Approach (2D) – Non SCDA

Performance Criteria

Base the assessment on the candidate's ability to:

- a. select and comply with the VOR/ LOC/ LOC BC or NDB instrument approach procedure to be performed;
- b. establish two-way communications with ATC using the proper communications phraseology and techniques, either personally, or, if appropriate, directs co-pilot/safety pilot to do so, as required for the phase of flight or approach segment;
- c. comply in a timely manner, with all clearances, instructions, and procedures issued by ATC and advise accordingly if unable to comply;
- d. select, tune, identify, confirm and monitor the operational status of ground and aircraft navigation equipment to be used for the approach procedure;
- e. establish the appropriate aircraft configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions;
- f. complete the aircraft check list items appropriate to the phase of flight or approach segment, including engine out approach and landing checklist, as appropriate;
- g. apply altitude corrections to all minimum altitudes depicted on the approach chart used when aerodrome temperatures are 0 degrees Celsius or colder in accordance with the General Section of the Canada Air Pilot;
- h. prior to final approach course, maintain declared altitudes (± 100 feet) without descending below applicable minimum altitudes, and maintain headings (± 10 degrees);
- i. apply necessary adjustment to the published Minimum Descent Altitude (MDA) and visibility criteria for the aeroplane approach category when required, such as NOTAMS, inoperative aeroplane and ground navigation equipment, inoperative visual aids associated with the landing environment;
- j. on the intermediate and final segments of the final approach course:
 1. maintain VOR/ LOC/ LOC BC tracking within $\frac{1}{2}$ scale deflection of the course deviation indicator or within 5 degrees of the desired track in the case of an NDB approach;
 2. fly the approach in a stabilized manner without descending below the applicable minimum altitudes depicted on the approach chart (+as required/-0 feet);
 3. descend to and accurately maintain the Minimum Descent Altitude (MDA) and track to the Missed Approach Point (MAP) or to the recommended minimum visibility that would permit completion of the visual portion of the approach with a normal rate of descent and minimal manoeuvring;
- k. maintain declared approach airspeeds (+10/-5 knots);
- l. initiate the missed approach procedure, if the required visual references for the intended runway are not obtained at the MAP
- m. execute a normal landing from a straight-in or circling approach as required.

Non Precision Instrument Approach (2D) – SCDA

Performance Criteria

Base the assessment on the candidate's ability to:

When using an SCDA technique while conducting the final approach segment of a non-precision approach to straight-in minima, the candidate will be assessed on his/her ability to:

- (a) use temperature corrections to MDA / DA and other published altitudes, during cold weather operations;
- (b) verify altitude and waypoint information, when supplied from a navigation database, against an independent source if available;
- (c) compute a stable approach path that approximates an optimum descent angle in accordance with Standard Operating Procedures (SOP), by using any aircraft computer-generated approach path systems or other methods of computing stable approach paths to the target touchdown point, for example by determining an appropriate descent angle or descent rate;
- (d) brief the anticipated procedure in accordance with SOPs, and in particular any additional altitude margin to the Minimum Descent Altitude (MDA), where applicable;
- (e) maneuver the aircraft so as to commence the final approach segment in the proper configuration and at an appropriate indicated airspeed, in accordance with SOPs;
- (f) overfly any step-down fix between the Final Approach Fix (FAF) and the Missed Approach Point (MAP) at or above the minimum altitude;
- (g) carry out a continuous descent, without level-offs, to be flown based on the descent angle obtained from the approach chart or as determined by the flight crew member(s);
- (h) meet all criteria for a stabilized approach by 1000 feet AGL under Instrument Meteorological Conditions (IMC) or 500 feet AGL under Visual Meteorological Conditions (VMC), or as defined by SOPs, in a timely manner;
- (i) maintain an appropriate vertical profile to a point in space which will permit a safe landing with minimum manoeuvring if the required visual reference to continue to land has been established;
- (j) initiate a missed approach if any stabilized approach parameter is not met by the applicable limit as established under criterion (h), or if the required visual reference necessary to continue to land has not been established, upon reaching the earlier of: i. MDA / DA; or ii. the MAP; and
- (k) commence the horizontal (lateral) navigation portion of the published missed approach procedure at the MAP.

Note: An air operator need not take advantage of an exemption to paragraph 602.128(2)(b) of the CARs in order to implement SCDA procedures.

Without that exemption however, flight crews must be mindful to add an appropriate altitude margin to MDA if using it as a DA during an SCDA profile, so as to avoid flying below MDA should a missed approach be initiated because visual references to continue the approach to land have not materialized.

In air operations taking advantage of that exemption, a pilot may descend below a published MDA, even if the required visual reference necessary to continue the approach to land has not been established, after initiating a missed approach at MDA, when MDA is used as a DA at the end of an SCDA profile. Approved Check Pilots should be aware that this exemption is subject to the following conditions:

- (1) The pilot-in-command shall conduct a final approach descent with a planned SCDA from the final approach fix to a nominal landing runway threshold crossing height of 50 feet;
 - (2) The pilot-in-command shall initiate a missed approach upon reaching the earliest of either the MDA or the MAP, where the required visual reference necessary to continue the approach to land has not been established;
 - (3) The pilot-in-command shall not conduct an SCDA approach on procedures requiring a remote altimeter setting correction;
 - (4) The pilot-in-command shall conduct the instrument approach procedure to straight-in minima, and the final approach course shall not be more than 15 degrees from runway centreline; and
- (5) The pilot-in-command of Instrument Flight Rule (IFR) aircraft operated by the holder of an air operator certificate or a private operator certificate issued by the Minister shall maintain compliance with all of the requirements set out in the Schedule attached to this exemption.

GPS Approach (2D)

Performance Criteria

Base the assessment on the candidate's ability to:

- a. select and comply with the GPS instrument approach procedure to be performed;
- b. establish two-way communications with ATC using the proper communications phraseology and techniques, either personally, or, if appropriate, directs co-pilot/safety pilot to do so, as required for the phase of flight or approach segment;
- c. comply in a timely manner, with all clearances, instructions, and procedures issued by ATC and advise accordingly if unable to comply
- d. retrieve the GPS approach from the database, conduct a Receiver Autonomous Integrity Monitoring (RAIM) check or a multi-sensor RNAV check and verify the approach waypoints used for the approach procedure;
- e. establish the appropriate aircraft configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions
- f. complete the aircraft check list items appropriate to the phase of flight or approach segment, including engine out approach and landing checklist, as appropriate;
- g. apply altitude corrections to all minimum altitudes depicted on the approach chart used when aerodrome temperatures are 0 degrees Celsius or colder in accordance with the General Section of the Canada Air Pilot.
- h. prior to final approach course, maintain declared altitudes (± 100 feet) without descending below applicable minimum altitudes and maintain headings (± 10 degrees);
- i. apply necessary adjustment to the published Minimum Descent Altitude (MDA) and visibility criteria for the aeroplane approach category when required, such as NOTAMS, inoperative aeroplane and ground navigation equipment, inoperative visual aids associated with the landing environment.
- j. take appropriate action in the event that a RAIM alert is displayed when the aircraft is established on the final approach course;
- k. on the intermediate and final segments of the final approach course:
 1. maintain GPS track bar within $\frac{1}{2}$ scale deflection;
 2. fly the approach in a stabilized manner without descending below the applicable minimum altitudes depicted on the approach chart (+as required/-0 feet);
 3. announce the approach active mode within 2 nm prior to reaching the Final Approach Waypoint (FAWP) inbound;
- l. descend to and accurately maintain the Minimum Descent Altitude (MDA) and track to the Missed Approach Waypoint (MAWP) or to the recommended minimum visibility that would permit completion of the visual portion of the approach with a normal rate of descent and minimal manoeuvring;
- m. maintain the declared approach airspeeds within +10/-5 knots;
- n. initiate the missed approach procedure when the required visual references for the intended runway are not obtained at the MAWP; and
- o. execute a normal landing from a straight-in or circling approach as required.

Precision Instrument Approach (3D - ILS or LPV)

Performance Criteria

Assessment of the candidate's ability to:

- a. select and comply with the ILS or LPV instrument approach procedure to be performed;
- b. establish two-way communications with ATC using the proper communications phraseology and techniques, either personally, or, if appropriate, directs co-pilot/safety pilot to do so, as required for the phase of flight or approach segment;
- c. comply in a timely manner, with all clearances, instructions, and procedures issued by ATC and advise accordingly if unable to comply;
- d. select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach procedure, **and in the case of an LPV approach, retrieve and validate the procedure from the appropriate database and conduct a RAIM check or similar operational check in accordance with SOPs;**
- e. establish the appropriate aircraft configuration and airspeed/V-speed considering turbulence, wind shear, microburst conditions, or other meteorological and operating conditions;
- f. complete the aircraft checklist items appropriate to the phase of flight or approach segment, including engine-out approach and landing checklist, as appropriate;
- g. apply altitude corrections to published altitudes depicted on the approach chart used when aerodrome temperatures are 0 degrees Celsius or colder in accordance with the General Section of the *Canada Air Pilot*;
- h. apply necessary adjustment to the published Decision Height (DH) or Decision Altitude (DA) and visibility criteria for the aeroplane approach category when required, considering items such as NOTAMS, inoperative aeroplane and ground navigation equipment, inoperative visual aids associated with the landing environment;
- i. prior to final approach course, maintain declared or assigned altitudes within ± 100 feet without descending below applicable minimum altitudes and maintain headings within ± 10 degrees;
- j. on final approach course, allow no more than $\frac{1}{2}$ scale deflection of the localizer and/or glide slope / **glide path** indications;
- k. **during an approach to LPV minimums, confirm meeting Required Navigation Performance (RNP) criteria, such as an approach-active mode for example, prior to reaching the Final Approach Waypoint (FAWP) inbound on the final approach course, in accordance with SOPs;**
- l. **during an approach to LPV minimums, take appropriate action in the event that RNP criteria are no longer met when the aircraft is established on the final approach course;**
- m. maintain declared approach airspeeds within +10/-5 knots;
- n. maintain a stabilized descent to the Decision Height (DH) or Decision Altitude (DA) to permit completion of the visual portion of the approach and landing with minimal manoeuvring; and
- o. initiate the missed approach procedure, upon reaching the DH/DA, when the required visual references for the intended runway are not obtained.

Circling Approach

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of circling approach categories, speeds, and complies with procedures to a specified runway;
- b. in simulated or actual instrument conditions to MDA, accomplish the circling approach selected by the ACP;
- c. demonstrate sound judgment and knowledge of the aeroplane maneuvering capabilities throughout the circling approach;
- d. confirm the direction of traffic and adheres to all restrictions and instructions issued by ATC;
- e. descend at a rate that ensures arrival at the MDA at, or prior to, a point from which a normal circle-to-land manoeuvre can be accomplished;
- f. avoids descent below the appropriate circling MDA or exceeding the visibility criteria until in a position from which a descent to a normal landing can be made;
- g. manoeuvre the aeroplane, after reaching the authorized circling approach altitude, by visual references to maintain a flight path that permits a normal landing on a runway at least 90° from the final approach course;
- h. perform the procedure without excessive manoeuvring and without exceeding the normal operating limits of the aeroplane (the angle of bank should not exceed 30°);
- i. maintain the desired altitude within -0, +100 feet, heading/track within $\pm 10^\circ$, the airspeed/Vspeed within +10/-5 knots, but not less than the airspeed as specified in the POH or the AFM;
- j. use the appropriate aeroplane configuration for normal and abnormal situations and procedures, where applicable;
- k. turn in the appropriate direction, when a missed approach is dictated during the circling approach, and uses the correct procedure and aeroplane configuration; and
- l. perform all procedures required for the circling approach and aeroplane control in a smooth, positive, and timely manner.

17. GO-AROUND (GOA)

Aim

To carry out a successful missed approach.

Description

Following an instrument approach, the candidate will conduct a missed approach at any time from intercepting final approach to touch down on the runway. Except where ATC amends it, the candidate must follow the published missed approach profile.

In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Missed Approach

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of missed approach procedures associated with standard instrument approaches;
- b. initiate the missed approach procedure promptly by the timely application of power, establish the proper climb attitude, and reduce drag in accordance with the approved procedures;
- c. report to beginning the missed approach procedure;
- d. comply with the published or alternate missed approach procedure;
- e. report with ATC anytime the aircraft is unable to comply with a clearance, restriction, or climb gradient;
- f. follow the recommended aeroplane check list items appropriate to the go-around procedure;
- g. request a clearance, if appropriate, to the alternate airport, another approach, a holding fix, clearance limit, or as directed by the ACP; and
- h. maintain recommended airspeeds within +10/-5 knots;
- i. maintain heading, track or bearing within ± 10 degrees; and
- j. climb to and maintain the published missed approach altitude, or as cleared by ATC or the examiner within ± 100 feet.

18. LANDING (LDG)

Aim

To carry out a normal or crosswind landing and, where practical, a landing from an instrument approach by visual descent from an approach MDA or DA. If required by the operations manual, within the conduct of the approach, complete a successful circling approach.

Description

The candidate will demonstrate:

1. one normal landing which, where practical, be conducted without external or internal glideslope information;
2. one landing from an instrument approach and, where prevailing conditions prevent an actual landing, an approach to a point where a landing could have been made. This is not required where the air operator's certificate authorizes operations under day VFR only, or the air operator assigns the pilot to day VFR flights only;
3. one crosswind landing, where practicable, under existing meteorological, runway and airport traffic conditions;
4. one landing and manoeuvring to that landing with a simulated failure of 50 percent of the available engines; and
5. one landing under simulated circling approach conditions except that where prevailing conditions prevent a landing, an approach to a point where a landing could have been made.

*Note: Any of the landings and approaches to landings specified in this section may be combined. A minimum of **two** landings is required.*

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of normal and crosswind approaches and landings including recommended approach angles, airspeeds, V-speeds, configurations, performance limitations, and ATC or examiner instructions;
- b. consider factors to be applied to the approach and landing such as displaced thresholds, meteorological conditions, NOTAMs, wake turbulence, wind shear, microburst, gust/wind factors, visibility, runway surface, braking conditions, and other related safety factors (as appropriate to the aeroplane);
- c. establish the approach and landing configuration appropriate for the runway and meteorological conditions, and adjust the powerplant controls as required;
- d. perform the aircraft checklist items relative to the phase of flight;
- e. maintains a ground track that ensures the desired traffic pattern will be flown, taking into account any obstructions and ATC or ACP instructions;
- f. verify existing wind conditions, makes proper correction for drift, and maintains a precise ground track;
- g. maintain a stabilized approach and the desired airspeed/V-speed within +10/-5 knots.
- h. execute a landing from an approach MDA or DA when the required visual references for the intended runway are obtained;
- i. accomplish a smooth, positively controlled transition from final approach to touchdown or to a point in the opinion of the ACP that a safe full stop landing could be made;
- j. maintain positive directional control and crosswind correction during the after-landing roll;
- k. use spoilers, prop reverse, thrust reverse, wheel brakes, and other drag/braking devices, as appropriate, in such a manner to bring the aeroplane to a safe stop; and
- l. complete the applicable after-landing checklist items in a timely manner and as recommended by the manufacturer.

19. GROUND ARRIVAL

Aim

To conduct after landing taxi in, arrival/engine shutdown, post-flight and flight close procedures as appropriate.

Description

The candidate will demonstrate the ability to manoeuvre the aircraft under its own power to an arrival area for parking, shut down the engine(s) and ancillary systems and conduct required post flight procedures such as securing the aircraft.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate proficiency by maintaining correct and positive control;
- b. consider the safety of nearby persons or property by maintaining proper look-out, spacing between aircraft and obstructions;
- c. accomplish the applicable checklist items and performs the recommended procedures;
- d. maintain the desired taxi speed;
- e. comply with instructions issued by ATC (or the examiner simulating ATC);
- f. observe runway hold lines, localizer and glide slope critical areas, and other surface control markings and lighting to prevent a runway incursion;
- g. maintain constant vigilance and aeroplane control during the taxi operation; and
- h. record forms/logs and flight time/discrepancies.

20. FLIGHT CLOSE (FLC)

Note: Aim, Description and Performance Criteria not provided at this time.

21. PM DUTIES

Aim

To demonstrate proper division of PM duties in accordance with the COM and SOP's.

Description

Each pilot will demonstrate PM duties sufficient to determine compliance with and knowledge of, aircraft procedures and company SOP's. This will include normal and abnormal procedures while operating as PM. Flight crew may be required to conduct PM duties from a seat position that they do not normally occupy (PPC with two Captains or two F/Os). In this situation, the training unit will provide PM training to the candidates in the seat they will occupy during the PPC.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. adhere to PM duties as outlined in the COM and/or SOP's;
- b. complete necessary duties assigned by the pilot flying;
- c. maintain crew discipline during normal and abnormal procedures;
- d. demonstrate familiarity with the procedures contained in the QRH or paper checklist;
- e. demonstrate FMS inputs, as applicable;
- f. maintain situational awareness as a crew member;
- g. effectively share cockpit workload; and
- h. maintain crew awareness, or attention to flight mode annunciations.

22. ENGINE FAILURE

Aim

To maintain control of the aircraft and carry out the appropriate engine failure procedures in accordance with the POH/AFM and/or SOP's.

Description

The pilot will demonstrate the ability to maintain control and safely handle malfunctions on at least two simulated engine failures any time during the check. The engine failures in this section exclude engine failures on the runway followed by a rejected take-off.

Engine Failure – Multi-Engine Aeroplane

Performance Criteria

Base the assessment on the candidate's ability to:

- a. recognize an engine failure or the need to shut down an engine as simulated by the ACP;
- b. complete engine failure vital action checks from memory;
- c. maintain positive aeroplane control. Establish a bank of approximately 5°, if required, or as recommended by the manufacturer, to maintain coordinated flight, and properly trim for that condition;
- d. set powerplant controls, reduce drag as necessary, correctly identify and verify the inoperative powerplant(s) after the failure (or simulated failure);
- e. maintain the operating powerplant(s) within acceptable operating limits;
- f. establish the best engine inoperative airspeed as appropriate to the aircraft and condition of flight;
- g. establish and maintain the recommended flight attitude and configuration for the best performance for all manoeuvring necessary for the phase of flight;
- h. follow the prescribed aeroplane checklist, and verify the procedures for securing the inoperative powerplant(s);
- i. determine the cause for the powerplant(s) failure and if a restart is a viable option;
- j. maintain desired altitude within ± 100 feet, when a constant altitude is specified and is within the capability of the aeroplane;
- k. maintain the desired airspeed within ± 10 knots;
- l. maintain the desired heading within $\pm 10^\circ$ of the specified heading;
- m. demonstrate proper powerplant restart procedures (if appropriate) in accordance approved procedure/checklist or the manufacturer's recommended procedures and pertinent checklist items; and
- n. monitor all functions of the operating engine and make necessary adjustments.

Engine Failure – Single Engine Aeroplane

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of the flight characteristics, approach and forced (emergency) landing procedures, and related procedures to use in the event of a powerplant failure (as appropriate to the aeroplane);
- b. maintain positive control throughout the manoeuvre;
- c. establish and maintain the recommended best glide airspeed, ± 10 knots, and configuration during a simulated powerplant failure;
- d. select a suitable airport or landing area, which is within the performance capability of the aeroplane;
- e. establish a proper flight pattern to the selected airport or landing area, taking into account altitude, wind, terrain, obstructions, and other pertinent operational factors;
- f. follow the emergency checklist items appropriate to the aeroplane;
- g. determine the cause for the simulated powerplant failure (if altitude permits) and if a restart is a viable option; and
- h. use configuration devices, such as landing gear and flaps in a manner recommended by the manufacturer.

23-27. ABNORMAL/EMERGENCIES

Aim

To complete recommended checks and procedures in accordance with the POH, AFM, or other applicable publications in event of system malfunctions or other emergencies.

Description

System malfunctions will consist of a selection adequate to determine that the pilot has satisfactory knowledge and ability to safely handle malfunctions. The candidate will be required to demonstrate the use of as many simulated abnormal and emergency procedures as is necessary to confirm that the pilot has an adequate knowledge and ability to perform these procedures.

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of the emergency procedures appropriate to the approved AFM (as may be determined by the ACP) relating to the particular aeroplane type;
- b. promptly identify the malfunctions;
- c. promptly apply correct checks and procedures in accordance with the POH/AFM, or other approved publication;
- d. consider and apply any restrictions or limitations to the operation of a system(s) and procedures in order to continue the flight;
- e. demonstrate knowledge and discipline in the use of the electronic checklist and alerting system, as applicable; and
- f. develop a reasonable course of action for the remainder of the flight.

ADDITIONAL FLIGHT TEST EXERCISES

A. REJECTED LANDING 50 FT.

Aim

To carry out a successful rejected landing.

Description

The candidate will conduct a rejected landing after having completed the instrument portion of the approach with the runway in sight; the aircraft configured for landing and in final descent to the runway. Initiate this manoeuvre at approximately 50 feet above the runway and just about over the runway threshold. The ACP may combine the rejected landing with the missed approach.

In addition, the candidate will demonstrate the proper programming and use of Flight Management Systems as applicable.

Rejected Landing

Performance Criteria

Base the assessment on the candidate's ability to:

- a. demonstrate adequate knowledge of a rejected landing procedure including the conditions that dictate a rejected landing, the importance of a timely decision, the recommended airspeed/V-speeds, and also the applicable "clean-up" procedure;
- b. make a timely decision to reject the landing for actual or simulated circumstances and make appropriate notification when safety-of-flight is not an issue;
- c. apply the appropriate power setting for the flight condition and establish a pitch attitude necessary to obtain the desired performance;
- d. retract the wing flaps/drag devices and landing gear, if appropriate, in the correct sequence and at a safe altitude, establishes a positive rate of climb and the appropriate airspeed/V-speed within +10/-5 knots;
- e. trims the aeroplane as necessary, and maintain the proper ground track during the rejected landing procedure; and
- f. accomplish the appropriate checklist items in a timely manner in accordance with approved procedures.

B. POWER LOSS ON ICL

Aim

To recover from an engine failure at the most critical stage of flight.

Description

In a simulator, the pilot will demonstrate a take-off with failure of the critical engine at a speed greater than V_1 and at an altitude of less than 50 feet AGL; or at a speed as close as possible to, but greater than V_1 when V_1 and V_2 , or V_1 and V_r are identical.

In an airplane, the pilot will demonstrate a simulated engine failure after take-off at a safe altitude and no lower than $V_2 + 10$ airspeed and appropriate to the aeroplane type under the prevailing conditions. If the AFM does not provide V speeds, the engine failure will occur as close to the take-off safety speed as is safe and appropriate to the aeroplane type under the prevailing conditions.

Performance Criteria

Engine failures after V_1 require good heading control. There are no tolerances published on how much swing that an aircraft may experience on an engine failure. Each aircraft type has its own characteristics and this in turn will depend on the time of engine failure and the type given. The ACP will base the assessment on his knowledge of the particular aircraft type. Once under control, evaluate the candidate according to the performance criteria of the *Engine Failure Multi Engine Aeroplane* in section 23. Engine Failure above.