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FOREWORD

This manual contains the standards, policies, procedures and guidelines that pertain to the Pilot Examiner (PE) program and is published for use by Transport Canada Civil Aviation Inspectors and Pilot Examiners.

Pilot Examiners are approved and delegated by the regional Technical Team Leads (TTL) responsible for Flight Operations, and are authorized to conduct flight tests on behalf of the Minister.

When performing their duties, Pilot Examiners are acting as Agents of the Minister of Transport pursuant to Part 1, Subsection 4.3(1) of the *Aeronautics Act*, thus it is imperative that the policies and procedures specified in this manual are followed.

Transport Canada Civil Aviation Inspectors will also abide by the policies and procedures of this manual specified for the approval of PEs as well as the conduct of flight tests.

Pilot Examiner monitoring procedures will be conducted in accordance with Advisory Circular AC-408-001 – Pilot Examiner (PE) Monitoring Procedures – Aeroplane and Helicopter and in accordance with Staff Instruction SI-SUR-020 – Pilot Examiner Monitoring Procedures.

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Ce manuel est aussi disponible en français.

CHANGES IN THIS EDITION

- 3.4(1) General Requirements – Pilot Examiners must be current and meet the recency requirement for the aircraft type, except when conducting renewal flight tests for Flight Instructor Ratings – Aeroplane or Aerobatic, in which case the candidate may be Pilot-in-Command (PIC).
- 3.7(1) Experience and Qualifications – Changes to the experience requirements for the conduct of Group 4 Instrument Rating flight tests.
- 3.11 Pilot Examiner Training - If a four-seat aircraft is available, a Civil Aviation Safety Inspector (CASI) may be a third occupant on board for the final monitoring of the PE candidate conducting a flight test. In such cases, the CASI is considered a “crew member” in accordance with section 101.01 of the *Canadian Aviation Regulations (CARs)* – Interpretations, which states “crew member means a person assigned to duty in an aircraft during flight time. When a third occupant is on board for flight tests in
- (a) an aeroplane, no stalls, spirals, spins, unusual attitudes, simulated emergencies or malfunctions will be conducted.
 - (b) a helicopter, no unusual manoeuvres, simulated emergencies or malfunctions will be conducted.
- 3.18 How Standardization is Achieved – Pilot Examiner Workshops will now be conducted by an authorized Regional Civil Aviation Safety Inspector. The workshops will be based on material provided by Transport Canada Headquarters.
- 5.0 Conduct of the Flight Test - An informal language proficiency assessment will be carried out by the examiner for Canadian candidates educated in English or French during the questioning of and evaluation of Ex. 2 Aeroplane Familiarization and Preparation for Flight for the Recreation Pilot Permit (RPP(A)), Private Pilot License (PPL) and Commercial Pilot License (CPL) flight tests or of Item Ex.2 – Preparation and Airworthiness for PPL(H) and CPL(H) flight tests. An “Expert” or “Operational” assessment must be demonstrated to continue the flight test. An assessment of “Below Operational” will terminate the flight test. Reference should be made to Advisory Circular 401-009 - The Conduct of Aviation Language Proficiency Demonstrations.
- 5.2 Testing an Instrument Proficiency Check (IPC) with a Flight Simulation Training Device (FSTD) - The FSTD must meet all the equipment requirements stipulated in Revision 3 of the Aeroplane and Rotorcraft Simulator Manual - Chapter 6 – Non-Specific Type Devices – Level 2 or higher IPC/MCC.
- 5.3(8) Aircraft Equipment – Instrument Rating - Owners of privately-registered non-GNSS equipped aircraft may use their aircraft for the conduct of their personal IPC.
- 5.9 Renewal and Upgrade of a Flight Instructor Rating - An examiner must ascertain very clearly whether a candidate wants to simply upgrade to a higher class or wants to renew the existing flight instructor rating. A failure to renew invokes section 401.17 of the CARs which requires that the Minister suspend the rating. If the flight test was merely an attempt to upgrade, an unsuccessful attempt to upgrade allows the candidate to continue with the existing rating until it expires or is renewed. [Refer: SI-SUR-016].
- 5.19 Failure of a Flight Test – Complete Retest - New evaluation policy limiting the number of “2s” on Part IV flight tests, except for the Flight Instructor Rating - exceeding the maximum number of combined “1s” and “2s” stipulated on the table at section 5.19 of this manual.
- 5.25 Post-flight Debriefing - The candidate will log the flight test flight time as dual flight time as the examiner was the pilot-in-command and was qualified as an instructor. **The dual flight time recorded during the flight test CANNOT be counted towards meeting any of the minimum experience requirements for the permit licence or rating.**
- 7.12, 8.12, 9.12 – Forced Landing - to permit a successful and safe approach towards a landing in the first 1/3 of a suitable landing area. An approach that would have touched down more than 1000 feet beyond the touchdown zone in the first 1/3 of the landing area will be evaluated as a 2 or less.

- 9.6 Spinning - Despite the use of correct entry technique and maintaining full pro-spin control application, certain aeroplane types may nevertheless enter a spiral dive. If this occurs, the candidate is expected to announce "Spiral Dive" and use the correct recovery technique. The manoeuvre does not have to be repeated.
- 9.13(3) Enroute Navigation - The candidate is expected to make sufficient in-flight entries to assist with position estimating, ground speed checks, Estimated Time of Arrival (ETA) at various check points on the navigation flight log.
- 9.14(5) Radio Navigation - If installed, the candidate will utilize certified Global Navigation Satellite System (GNSS) equipment for this item.

TABLE OF CONTENTS

CHANGES IN THIS EDITION	4
TABLE OF CONTENTS	6
1.0 INTRODUCTION	12
1.1 Purpose	12
1.2 Applicability	12
1.3 Description of Changes	12
2.0 REFERENCES AND REQUIREMENTS	12
2.1 Reference Documents	12
2.2 Cancelled Documents	13
2.3 Definitions and Abbreviations	13
3.0 EXAMINER ACCREDITATION AND RESPONSIBILITIES.....	15
3.1 Pilot Examiner Program	15
3.2 Pilot Examiner Accreditation Criteria	15
3.3 Need	15
3.4 General Requirements	16
3.5 Knowledge	17
3.7 Experience and Qualifications	17
3.9 Accreditation Process	20
3.10 Accreditation Process – Flight Instructor Rating Only	20
3.11 Pilot Examiner Training	21
3.12 Letter of Accreditation	23
3.14 Cancellation, Suspension or Refusal to Renew	26
3.15 Reinstatement of Accreditation	27
3.16 Request for Review	27
3.17 Pilot Examiner Responsibilities	28
3.18 How Standardization is Achieved	29
3.19 Recurrent Monitoring	29
3.20 Special Monitoring	31
3.21 Maintaining Recency	32
3.22 Liability Insurance	32
3.23 Liability – Delegated Authority	33
3.24 Request for Review of a Pilot Examiner’s Decision	33
3.25 Testing Examiner’s Own Students	33
3.26 Flight Tests for Initial Flight Instructor Ratings	33
3.27 Conflict of Interest	33
3.28 Flight Test Results	34
3.29 Security of Flight Test Results	34
4.0 PRINCIPLES OF EVALUATION	34
4.1 Aim of the Flight Test	34

4.2	Evaluation Process.....	35
4.3	Evaluation Cycle	35
4.4	Factors Affecting Evaluation	35
4.5	Evaluation Errors	37
4.6	Oral Questions.....	38
4.7	Handling Candidate Answers	39
4.8	Qualities of Oral Questions	39
4.10	4 Point Marking Scale.....	41
4.11	Errors	42
4.12	Deviations.....	42
4.13	Using the Elements of the 4-Point Scale.....	42
5.0	CONDUCT OF THE FLIGHT TEST	44
5.1	Examiner Responsibility during a Test.....	45
5.2	Flight Testing on a Flight Simulation Training Device (FSTD)	46
5.3	Aircraft Equipment Requirements.....	47
5.4	Meeting the Candidate	51
5.5	Letter of Recommendation.....	51
5.6	Establishing the Candidate's Eligibility.....	51
5.7	Authorization of Flight Instructor Rating Flight Tests.....	54
5.8	Initial Flight Instructor Rating	54
5.9	Renewal and Upgrade of Flight Instructor Rating	55
5.10	Conduct of the Flight Instructor Flight Test	56
5.11	Test Conditions.....	57
5.12	Briefing the Candidate	57
5.13	Flight Test.....	59
5.14	Pass Marks.....	59
5.15	Repeated Flight Test Items.....	59
5.16	Incomplete Flight Test	60
5.17	Failure of a Flight Test	61
5.18	Partial Flight Test	61
5.19	Complete Re-test.....	61
5.20	Flight Test Profile	63
5.21	Assessment of Flight Test Performance.....	64
5.22	Examiner Discretion	65
5.23	Marking Scales.....	66
5.24	Flight Test Remarks	66
5.25	Post Flight Debriefing.....	66
5.26	Handling a Failed Flight Test.....	67
5.27	Flight Test Records.....	68
5.28	Flight Test Reports.....	68
5.29	Follow-Up and Administration.....	69
5.30	Instructions for Completion of Flight Test Reports	69
5.31	Administrative Process.....	71

6.0	PASSENGER-CARRYING RATING – ULTRA-LIGHT AEROPLANE	71
6.1	Aircraft Familiarization	72
6.2	Preparation for Flight	72
6.3	Taxiing (and Canopy Inflation for Powered Parachutes)	73
6.4	Takeoff	73
6.5	Stall	73
6.6	Pilot Navigation	73
6.7	Precautionary Landing	74
6.8	Forced Landing	74
6.9	Overshoot	75
6.10	Emergency Procedures	75
6.11	Circuit	75
6.12	Approach and Landing	75
6.13	Slipping	75
7.0	PILOT PERMIT-RECREATIONAL- AEROPLANE	76
7.1	Ex.2 – Aeroplane Familiarization and Preparation for Flight	76
7.2	Ex.3 - Ancillary Controls	77
7.3	Ex.4 – Taxiing	77
7.4	Ex.11 – Slow Flight	77
7.5	Ex.12 – Stall	78
7.6	Ex.14 –Spiral	78
7.7	Ex.15 – Slipping	78
7.8	Ex.16 – Takeoff	79
7.9	Ex.17 – Circuit	79
7.10	Ex.18 – Approach and Landing	79
7.11	Ex.21 – Precautionary Landing	80
7.12	Ex.22 – Forced Landing	80
7.13	Ex.23 – Pilot Navigation	81
7.14	Ex.29 – Emergency Procedures/Malfunctions	82
8.0	PRIVATE PILOT LICENCE – AEROPLANE	82
8.1	Ex. 2 – Aeroplane Familiarization and Preparation for Flight	82
8.2	Ex. 4 – Taxiing	84
8.3	Ex. 9 – Steep Turn	84
8.4	Ex. 11 – Slow Flight (Flight near Minimum Controllable Airspeed)	84
8.5	Ex. 12 – Stall	84
8.6	Ex. 14 – Spiral	85
8.7	Ex. 15 – Slipping	85
8.8	Ex. 16 – Takeoff	85
8.9	Ex. 17 – Circuit	86
8.10	Ex. 18 – Approach and Landing	86
8.11	Ex. 21 – Precautionary Landing	87
8.12	Ex. 22 – Forced Landing	87

8.13	Ex. 23 – Pilot Navigation	88
8.14	Ex. 24 – Instrument Flying.....	89
8.15	Ex. 29 – Emergency Procedures/Malfunctions.....	90
8.16	Ex. 30 – Radio Communications.....	90
9.0	COMMERCIAL PILOT LICENCE – AEROPLANE.....	91
9.1	Ex. 2 – Aeroplane Familiarization and Preparation for Flight.....	91
9.2	Ex. 4 – Taxiing.....	92
9.3	Ex. 9 – Steep Turn	93
9.4	Ex. 11 – Slow Flight.....	93
9.5	Ex. 12 – Stall	93
9.6	Ex. 13 – Spinning.....	93
9.7	Ex. 15 – Slipping.....	94
9.8	Ex. 16 – Takeoff.....	94
9.9	Ex. 17 – Circuit.....	95
9.10	Ex. 18 – Approach and Landing.....	95
9.11	Ex. 21 – Precautionary Landing.....	96
9.12	Ex. 22 – Forced Landing	97
9.13	Ex. 23 – Pilot Navigation	97
9.14	Ex. 24 – Instrument Flying and Use of Radio Navigation Aids.....	99
9.15	Ex. 29 – Emergency Procedures/Malfunctions.....	100
9.16	Ex. 30 – Radio Communications.....	101
10.0	PRIVATE AND COMMERCIAL PILOT LICENCE – HELICOPTER.....	101
10.1	Airmanship.....	101
10.2	Item Ex. 2 – Preparation for Flight.....	101
10.3	Item Ex. 3 – Ancillary Controls and Aircraft Systems	103
10.4	Item Ex. 9 – Takeoff and Landing To and From the Hover.....	103
10.5	Item Ex. 10 – Hover, Taxi and Hovering Turns	103
10.6	Item Ex. 11 – Engine Failure at the Hover or Hover Taxi	103
10.7	Item Ex. 12 – Transitions.....	103
10.8	Item Ex. 14 – Malfunctions and Emergency Procedures.....	103
10.9	Item Ex. 15 – The Circuit.....	104
10.10	Item Ex. 16 – Sideways and Rearward Flight	104
10.11	Item Ex. 17 – Deceleration and Steep Turn.....	104
10.12	Item Ex. 18 – Autorotations.....	105
10.13	Item Ex. 20 – Pilot Navigation.....	106
10.14	Item Ex. 22 – Minimum Safe Altitude Operations.....	107
10.15	Item Ex. 23 – Sloping Ground Operations.....	107
10.16	Item Ex. 24 – Advanced Takeoffs and Landings.....	108
10.17	Item Ex. 25 – Confined Areas	108
10.18	Item Ex. 30 – Instrument Flying	108
10.19	Item Ex. 31 – Radio Communication	109
11.0	MULTI-ENGINE – AEROPLANE.....	109

11.1	Ex. 1 – Aeroplane Familiarization and Preparation for Flight.....	109
11.2	Ex. 2 – Ancillary Controls/Operations of Aircraft Systems.....	110
11.3	Ex. 3 – Taxiing.....	111
11.4	Ex. 4 – Takeoff, Circuit and Landing	111
11.5	Ex. 5 – Cruising Flight.....	111
11.6	Ex. 6 – Engine Failure (Cruise Flight) and Manoeuvring with One Engine Inoperative	111
11.7	Ex. 7 – Manoeuvring at Reduced Airspeed (This item is not slow flight).....	111
11.8	Ex. 8 A & B – Stall, Approach to Stall	112
11.9	Ex. 9 – Steep Turn	112
11.10	Ex. 10 – Engine Failure during Takeoff or Overshoot	112
11.11	Ex. 11 A – Intentional Engine Shutdown.....	112
11.12	Ex. 11 B – Arrival, Approach and Landing – One Engine Inoperative.....	113
11.13	Ex. 12 – Emergency Procedures/Malfunctions.....	113
12.0	INSTRUMENT RATING – GROUPS 1, 2 AND 3.....	113
12.1	Aeroplane	113
12.2	IMC or VMC.....	113
12.3	View Limiting Device	114
12.4	Use of the Autopilot.....	114
12.5	Use of Flight Simulation Training Devices (FSTD).....	114
12.6	Pilot in Command.....	114
12.7	Ex. 1 – Pre-Flight.....	114
12.8	Ex. 2 – IFR Operational Knowledge.....	115
12.9	Ex. 3 – ATC Clearances.....	115
12.10	Ex. 4 – Departure.....	116
12.11	Ex. 5 – Enroute.....	116
12.12	Ex. 6 – Arrival.....	116
12.13	Ex. 7 – Holding.....	116
12.14	Ex. 8 – Approaches.....	117
12.15	Ex. 9 – Missed Approach.....	118
12.16	Ex. 10 – Transition to Landing.....	118
12.17	Ex. 11 – Emergency Procedures.....	119
13.0	INSTRUMENT RATING GROUP 4 - HELICOPTER.....	119
13.1	Helicopter	119
13.2	IFR in IMC or VMC	120
13.3	Simulated IFR in VMC	120
13.4	View-Limiting Device	121
13.5	Use of Autopilot	121
13.6	Use of Full-Flight Simulator.....	121
13.7	Pilot-in-Command	121
13.8	Ex. 1 – Pre-Flight.....	121
13.9	Ex. 2 – IFR Operational Knowledge.....	122
13.10	Ex. 3 – ATC Clearances.....	122

13.11	Ex. 4 – Departure.....	123
13.12	Ex. 5 – Enroute.....	123
13.13	Ex. 6 – Arrival.....	123
13.14	Ex. 7 – Holding.....	123
13.15	Ex. 8 – Approaches.....	123
13.16	Ex. 9 – Missed Approach.....	125
13.17	Ex. 10 – Transition to Landing.....	125
13.18	Ex. 11 – Emergency Procedures.....	125
14.0	FLIGHT INSTRUCTOR RATING.....	126
14.1	Overall Planning and Organizing of a Lesson	127
14.2	Preparatory Ground Instruction.....	127
14.3	Pre-Flight Briefing	128
14.4	Flight Proficiency	128
14.5	Teaching Proficiency.....	128
14.6	Analysis of Student Performance	128
14.7	Post-Flight Debriefing.....	128
15.0	DOCUMENT HISTORY.....	129
16.0	CONTACT OFFICE.....	130

1.0 INTRODUCTION

- (1) The Pilot Examiner (PE) program is a service responding to the need to provide prompt, reliable, and objective flight testing on behalf of the Minister for the issuance of licences, permits and ratings.
- (2) The overall administration of the PE Program, including policy and standardization, is the responsibility of Transport Canada - Headquarters. The final selection, on-site training, accreditation and monitoring of Pilot Examiners are the responsibility of the Transport Canada Regional Offices. An essential element of the PE Program is communication. Pilot Examiner workshops and routine contact between Pilot Examiners and Flight Instructors combined with direct communication with Transport Canada Regional and Headquarters Civil Aviation Safety Inspector's (CASI) are essential for standardization and continuous improvement in flight training and testing in Canada.
- (3) Pilot Examiner authority is granted to individuals in accordance with the terms, conditions and guidelines of this manual.

1.1 Purpose

- (1) The purpose of this document is to provide the policy direction and guidance for the delegation, training and monitoring of Pilot Examiners as well as to provide additional guidance to Pilot Examiners and Transport Canada Inspectors regarding evaluation techniques during flight test evaluations.

1.2 Applicability

- (1) This document applies to all Transport Canada Civil Aviation (TCCA) employees, to individuals and organizations when they are exercising privileges granted to them under an External Ministerial Delegation of Authority as authorized by Part 1, Section 4.3(1) of the *Aeronautics Act*. This information is also available to the aviation industry for information purposes.

1.3 Description of Changes

- (1) This document is the seventh edition since the 1st. Edition, dated April 2005.
- (2) Due to the number of changes incorporated into this Issue, readers should review the content of the entire document. Revisions are indicated using a bold vertical solid bar in the right margin adjacent to affected paragraphs.

2.0 REFERENCES AND REQUIREMENTS

2.1 Reference Documents

- (1) It is intended that the following reference materials be used in conjunction with this document:
 - (a) *Aeronautics Act* (R.S., 1985, c. A-2);
 - (b) Part IV, Subparts 401, 405 and 406 of the *Canadian Aviation Regulations* (CARs) – Personnel Licensing and Training;
 - (c) Part IV, Subpart 408 of the CARs — Conduct of Flight Tests;
 - (d) Standard 428 of the CARs — Conduct of Flight Tests;
 - (e) Advisory Circular (AC) 408-001, Issue 01, 2013-01-23 — Pilot Examiner Monitoring Procedures – Aeroplane and Helicopter;
 - (f) Staff Instruction (SI) SUR-020, Issue 01, 2013-01-23 — Pilot Examiner Monitoring Procedures;
 - (g) Advisory Circular (AC) 401-004 Fourth Edition, 2019-02-28 – Conduct of Instrument Proficiency Checks;

- (h) Transport Canada Publication, TP 13984E, Issue 01, 2005-12-01 — Flight Test Guide – Ultra-light Aeroplanes;
- (i) Transport Canada Publication, TP 15031E, Issue 01, 2010-07-01 — Flight Test Guide – Powered Para-Glider;
- (j) Transport Canada Publication, TP 12475E, Issue 05, 2019-03-01 — Flight Test Guide – Recreational Pilot Permit – Aeroplane;
- (k) Transport Canada Publication, TP 13723E, Issue 05, 2019-03-01 — Flight Test Guide – Private Pilot Licence – Aeroplane;
- (l) Transport Canada Publication, TP 13462E, Issue 05, 2019-03-01 — Flight Test Guide – Commercial Pilot Licence – Aeroplane;
- (m) Transport Canada Publication, TP 3077E, Issue 03, 2013-02-01 — Flight Test Guide – Private and Commercial Pilot Licence – Helicopter;
- (n) Transport Canada Publication, TP 219E, Issue 10, 2019-03-01 — Flight Test Guide – Multi-engine Class Rating – Aeroplane;
- (o) Transport Canada Publication, TP 9939E, Issue 11, 2019-03-01 — Flight Test Guide – Instrument Rating – Groups 1, 2 and 3 – Aeroplane;
- (p) Transport Canada Publication, TP 15099E, Issue 01, 2011-03-01 — Flight Test Guide – Instrument Rating – Group 4 – Helicopter;
- (q) Transport Canada Publication, TP 5537E, Issue 04, 2010-04-01 — Flight Test Guide – Flight Instructor Rating – Aeroplane, Helicopter, Aerobatic;
- (r) Transport Canada form number 26-0652 — Application for Qualification as a Pilot Examiner – Flight Instructor Rating.
- (s) Transport Canada Publication, TP 9865E, Edition 03 - Aeroplane and Rotorcraft Simulator Manual.

2.2 Cancelled Documents

- (1) Not applicable.
- (2) By default, it is understood that the publication of a new issue of a document automatically renders any earlier issues of the same document null and void.

2.3 Definitions and Abbreviations

- (1) The following **definitions** are used in this document:
 - (a) **Ability:** is the power to do things well without interference or handicap.
 - (b) **Accreditation:** an official authorization to conduct flight tests that is conditional upon the qualification of the person and the continued need for assistance to carry out the powers, duties and functions of the Minister.
 - (c) **Conduct:** to take an active role in all phases of a flight test, including pre-flight preparation, the briefing, the control and pace of the various sequences, the assessment of the flight test candidate's performance, the debriefing, and the completion of the required documents including certification of the candidate's licence.
 - (d) **Competency:** A dimension of human performance that is used to reliably predict successful performance on the job. A competency is manifested and observed through behaviours that mobilize the relevant knowledge, skills and attitudes to carry out activities or tasks under specified conditions.

- (e) **Examiner:** an authorized Civil Aviation Safety Inspector (CASI); or a Pilot Examiner (PE) holding an official authorization to conduct flight tests on behalf of the Minister of Transport pursuant to Part 1, Subsection 4.3(1) of the *Aeronautics Act*.
 - (f) **Flight near minimum controllable airspeed:** flight on the backside of the power curve at a speed at which a stall is imminent if there is a significant increase in angle of attack, load factor or a reduction in power while maintaining control and altitude with some buffeting or with the stall warning intermittently activated.
 - (g) **Flight test:** an event having a series of tasks, exercises and manoeuvres performed by a candidate for the purpose of determining if that person meets the minimum skill requirements for the issuance of the permit, licence or rating sought.
 - (h) **Flight test item:** a task, manoeuvre or exercise listed on the flight test report.
 - (i) **FTAE:** Flight Training and Aeronautical Education database that is maintained by Transport Canada.
 - (j) **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, that permits experience acquired within to be credited towards meeting the requirements for the issuance of a licence or the endorsement of a rating, and meets the equipment requirements for progress evaluations and skill tests appropriate to the licence or rating.
 - (k) **Issuing Authority:** is, as appropriate, the Regional Director General - Aviation or the Technical Team Leader (TTL) responsible for Flight Operations.
 - (l) **Proficiency:** being prepared to handle any situation with which you might reasonably be presented, such as the skill to control or manoeuvre an aircraft.
 - (m) **Soft field:** a grass, unpaved, unimproved, soft or rough take-off or landing surface that may present variable rolling resistance or may present a risk of damage to the landing gear, if soft-field technique is not used when operating on soft or rough surfaces.
 - (n) **Technical Team Lead:** may be substituted by the title of the person responsible for examiner accreditation and implementation of the Pilot Examiner Program at the regional level.
- (2) The following **abbreviations** are used in this document:
- (a) **ACP:** Approved Check Pilot;
 - (b) **CASI:** Transport Canada Civil Aviation Safety Inspector – Flight Operations;
 - (c) **CARS:** Canadian Aviation Regulations;
 - (d) **CRM:** Cockpit Resource Management;
 - (e) **FTU:** Flight Training Unit;
 - (f) **FSTD** – Flight Simulation Training Device – includes full-flight simulators and flight training devices;
 - (g) **IPC** – Instrument Proficiency Check;
 - (h) **MCC** – Multi Crew Coordination;
 - (i) **PIC:** Pilot-in-Command;
 - (i) **SRM:** Single-pilot Resource Management;
 - (k) **TCC:** Transport Canada Centre;
 - (l) **TEM:** Threat and Error Management;
 - (m) **TTL:** Technical Team Lead.

3.0 EXAMINER ACCREDITATION AND RESPONSIBILITIES

3.1 Pilot Examiner Program

- (1) The Designated Flight Test Examiner (DFTE) program was introduced in June 1974, to provide prompt flight test service to the civil aviation training industry. The details of the program were established following discussions with the Royal Canadian Flying Clubs Association and the Air Transport Association of Canada. DFTEs were selected, trained, and appointed to conduct flight tests for private and commercial pilot licences and multi-engine class ratings.
- (2) Before the DFTE program was established, flying clubs could conduct the flight test for private pilot candidates at schools offering approved courses. Even earlier, the privilege of testing private pilot candidates was given to all Class 1 and 2 flight instructors. Mounting concerns about the accident rate among private pilots resulted in this privilege being removed in 1969.
- (3) Following discussions with Aerobatics Canada, the authority to conduct flight tests for some aerobatic instructor ratings was delegated to industry in 1985, subject to the same procedures for appointment and monitoring required of other authorities. Delegation of instrument rating flight tests was initiated in 1992. Delegation of flight instructor rating flight tests was initiated in 2003.
- (4) The term “Designated Flight Test Examiner” was replaced with the term “Pilot Examiner” (PE) in November 2004. In addition to more accurately describing the duties of the examiner, the term pilot examiner is more widely recognized in other countries. More than 9,000 flight tests each year are performed by pilot examiners, making this group of industry professionals an essential part of a safe aviation system.

3.2 Pilot Examiner Accreditation Criteria

- (1) An accreditation as a pilot examiner is an official authorization to conduct flight tests on behalf of the Minister of Transport pursuant to Part 1, Subsection 4.3(1) of the *Aeronautics Act*. This accreditation is given to qualified individuals on completion of the required training to conduct a particular type of flight test. It is, thereafter, the examiner's obligation to continue to meet the requirements of the accreditation.
- (2) Accreditations are subject to 6.71(1) of the *Aeronautics Act*, which states in part...“The Minister may refuse to issue or amend a Canadian Aviation Document (CAD), on the grounds that:
 - (a) the applicant is incompetent;
 - (b) the applicant...“in respect of which the application is made does not meet the qualifications or fulfill the conditions necessary for the issuance or amendment of the document”; or
 - (c) the Minister considers that the public interest – which may include the aviation record of the applicant ... warrants the refusal.
- (3) A suspension or a refusal to issue or renew may be appealed before the Transportation Appeal Tribunal of Canada.

3.3 Need

- (1) In order to mitigate administrative expenses, such as training and monitoring of pilot examiners while providing the necessary due diligence of a large cadre of examiners, the Pilot Examiner Program continues to require the justification of need to provide services on behalf of the Minister. Both the initial accreditation and the renewal of an accreditation are based on **need at a particular location or area within a Transport Canada region** for the delivery of a prompt flight testing service. Need is determined by the following criteria:
 - (a) Number of flight tests expected to be conducted annually;

- (b) Type of flight test (ultra-light aeroplane, recreational, private, commercial, multi-engine class rating, instrument rating or flight instructor rating);
 - (c) Number and proximity of Transport Canada Civil Aviation Inspectors and other pilot examiners who can provide the service.
- (2) The initial accreditation and the renewal of an accreditation are justified when the potential exists for the examiner to annually complete the following number of flight tests per authority:
- (a) No minimum number established for Ultra-light Aeroplane flight tests;
 - (b) 20 Recreational and Private Pilot flight tests;
 - (c) 10 Commercial Pilot flight tests;
 - (d) 10 Multi-Engine Class Rating flight tests;
 - (e) 10 Instrument Rating flight tests;
 - (f) 10 Flight Instructor Rating flight tests.
- (3) Once need has been established, selection of a pilot examiner will be based on the availability of a suitably qualified person. Once a pilot examiner has been selected, is trained and successfully completes a monitoring event in accordance with AC-408-001, the Issuing Authority responsible for Flight Operations will issue a Letter of Accreditation.

3.4 General Requirements

- (1) Pilot Examiners must:
- (a) have a minimum age of 21 years;
 - (b) hold a valid Commercial Pilot Licence or Airline Transport Pilot Licence with a valid medical certification, except in the case of ultra-light aeroplane examiners where a minimum of a valid Ultra-light Aeroplane Pilot Permit endorsed with a Flight Instructor Rating is required;
 - (c) hold a valid medical certification for the role as a pilot-in-command or flight crew member, in regard to fitness, restrictions, age and whether passengers are carried, in accordance with Subpart 404 and section 404.04 of the CARs, except that Pilot Examiners with FSTD-Only authority need not hold a valid medical certification in cases of expired medicals or temporary loss of medical fitness or where the Minister has suspended or refused to renew a PE's medical certification; [Refer: Paragraph 3.7(1)(f) below];
 - (d) hold the appropriate Flight Instructor Rating, when such a rating is required, pursuant to sections 405.21 and 405.22 of the CARs;
 - (e) meet the recency requirements of section 401.05 of the CARs, for cases when the pilot examiner must act as pilot-in-command (PIC) for the purposes of the flight test.
- Note:** Pursuant to sections 401.03 and 401.15 of the CARs, the PE or Civil Aviation Safety Inspector (CASI) must be PIC for candidates holding a Student Pilot Permit or Private or Commercial Pilot Licence, for Multi-engine Class Rating flight tests, for initial Instrument Rating flight tests and for expired Instrument Proficiency Checks (IPC).
- (f) be current on the helicopter type on which they conduct flight tests. If the flight requires the examiner to be pilot-in-command in accordance with sections 01.03 and 401.15 of the CARs as amended, it is important that the pilot examiner ensure that he or she is also meeting the FTU's pilot-in-command recent experience requirements;
 - (g) be current on the aeroplane or helicopter types such that the pilot examiner feels comfortable and safe to have a candidate perform any of the flight test items in the relevant Flight Test Guide, except being current on type is not required if the examiner is conducting a flight test for the renewal of a Flight Instructor Rating – Aeroplane or Aerobatic, in which case the candidate can be the pilot-in-command;

- (h) have a satisfactory training record where at least 80% of the last 10 candidates recommended by the pilot examiner applicant for the licensing flight tests for which authority is sought have succeeded on the first attempt;
- (i) hold the blanket or specific type qualification, as applicable, for the aircraft or type-specific flight simulation training device used for the flight test in accordance with sections 401.03 and CAR 401.15 of the CARs.

Note: Multiple type ratings may be held for similar aircraft types as stipulated at subparagraphs 421.40(3)(a)(i) and 421.40(3)(a)(ii).

- (j) have a good understanding of the flight characteristics of the aircraft and the installed equipment to be used for the flight test;
- (k) have a good record as a pilot and flight instructor in regard to accidents, incidents and violations;
- (l) have a reputation for integrity and dependability in the aviation industry and the community;
- (m) have a history of constructive interaction with Transport Canada; and
- (n) have a written recommendation from a CASI that is authorized to conduct flight tests pursuant to Part 4 of the CARs, having similar qualifications and experience on the same category of aircraft and has been personally acquainted with the examiner applicant's work, standards and integrity for at least one year.

3.5 Knowledge

- (1) A Pilot Examiner must:
 - (a) complete a training assignment; and
 - (b) attend a Pilot Examiner workshop prior to or as soon as practicable following accreditation, and thereafter every 2 years

3.6 Skill

- (1) The successful completion of standardization training and a **Pilot Examiner Monitor** conducted by a CASI is required in order to ensure competency in exercising the privileges of the accreditation, as outlined in this manual, Staff Instruction SI-SUR-020 – *Pilot Examiner Monitoring Procedures* and Advisory Circular AC-408-001 - *Pilot Examiner Monitoring Procedures Aeroplane and Helicopter*.

3.7 Experience and Qualifications

- (1) The following criteria are the minimum requirements for delegation and accreditation:
 - (a) Ultra-light Aeroplane
 - (i) hold a Flight Instructor Rating – Ultra-light Aeroplane or a Flight Instructor Rating – Aeroplane;
 - (ii) have at least 100 hours of flight instructor experience training pilots toward a Pilot Permit - Ultra-light Aeroplane.
 - (b) RPP(A), PPL(A), CPL(A), PPL(H), CPL(H):
 - (i) hold a Class 1 or 2 Flight Instructor Rating for the appropriate category of aircraft;
 - (ii) have at least 1,000 hours of flight instructor experience.
 - (c) Multi-Engine Rating – Aeroplane:
 - (i) have at least 1,500 hours of flight time as pilot-in-command; and

- (ii) have at least 500 hours pilot-in-command flight time in multi-engine aeroplanes, of which at least 400 hours are on aeroplanes other than center-line thrust;
- (d) Instrument Rating – Aeroplanes and Helicopters:
- (i) hold a Class 1 or Class 2 Flight Instructor Rating;
 - (ii) In the case of aeroplanes, hold the minimum licence and experience qualifications specified in subsection 425.21(9) of the CARs;
 - (iii) In the case of helicopters, hold an unrestricted ATPL and the minimum rating and experience qualifications specified in subsection 425.21(9) of the CARs;
 - (iv) in the case of aeroplanes, have at least 2,000 hours flight time as pilot-in-command, including 500 hours in multi-engine aeroplanes and at least 500 hours instrument flight time as pilot-in-command and 100 hours in IMC, exclusive of simulator or FTD time;
 - (v) in the case of helicopters, have at least 3,000 hours flight time as pilot-in-command, including 500 hours in helicopters certified for IFR operations that includes 200 hours as pilot-in-command, 200 hours in helicopters operated by a minimum of two pilots and 100 hours in IMC, exclusive of simulator or FTD time;
 - (vi) have conducted at least 200 hours in aeroplanes or 200 hours in helicopters of flight instructor experience toward the issuance of an Instrument Rating in aircraft of the category for which delegation is sought, considering:
 - (A) a maximum of 100 hours of credit for instructing experience on the alternate aircraft category; and
 - (B) a maximum of 100 hours credit for instructing on Full-Flight Simulators.
 - (vii) have successfully completed a **biennial** Pilot Proficiency Check that included the instrument flight procedures or an Instrument Proficiency Check with an authorized CASI, an authorized Pilot Examiner or a Canadian Approved Check Pilot (ACP).
- (e) Alternatively for Instrument Rating – Aeroplane and Helicopter
- (i) hold an Airline Transport Pilot Licence;
 - (ii) in the case of aeroplanes, hold the minimum licence and experience qualifications specified in CAR 425.21(9);
 - (iii) in the case of helicopters, hold an unrestricted ATPL and the minimum rating and experience qualifications specified in subsection 425.21(9) of the CARs;
 - (iv) in the case of aeroplanes, have at least 3,000 hours flight time as pilot-in-command in aeroplanes, including 500 hours in multi-engine aeroplanes, and at least 500 hours instrument flight time that includes 200 hours as pilot-in-command and 100 hours in IMC in aeroplanes, exclusive of simulator or FTD time;
 - (v) in the case of helicopters, have at least 3,000 hours flight time as pilot-in-command in helicopters, including 500 hours in helicopters certified for IFR operations, that includes 200 hours as pilot-in-command, 200 hours in helicopters operated by minimum of two pilots and 100 hour in IMC exclusive of simulator or FTD time;
 - (vi) have conducted at least 400 hours in aeroplanes or 400 hours in helicopters of flight instructor experience toward the issuance of an Instrument Rating in aircraft of the category for which delegation is sought, considering:
 - (A) a maximum of 100 hours of credit for instructing experience on the alternate category; and
 - (B) a maximum of 100 hours credit for instructing experience on Full-Flight Simulators.

- (vii) have successfully completed a biennial Pilot Proficiency Check or an Instrument Proficiency Check with an authorized CASI – Flight Operations, an authorized Pilot Examiner or a Canadian ACP.
- (f) Alternatively for Instrument Rating – FSTD (Full-Flight Simulator and/or FTD) Authority Only
- (i) have previously held in-flight authority as a CASI, PE or ACP;
 - (ii) have applied to the Issuing Authority for an FSTD-Only authority;
 - (iii) hold or have held an Airline Transport Pilot Licence and/or a Class 1 or Class 2 Flight Instructor Rating;
 - (iv) hold the experience qualifications specified in subsection 425.21(9) of the CARs;
 - (v) in the case of aeroplanes, have at least 3,000 hours flight time as pilot-in-command in aeroplanes, including 500 hours in multi-engine aeroplanes, and at least 500 hours instrument flight time that includes 200 hours as pilot-in-command and 100 hours in IMC in aeroplanes, exclusive of simulator or FTD time;
 - (vi) in the case of helicopters, have at least 3,000 hours flight time as pilot-in-command in helicopters, including 500 hours in helicopters certified for IFR operations, that includes 200 hours as pilot-in-command, 200 hours in helicopters operated by minimum of two pilots and 100 hour in IMC exclusive of simulator or FTD time; and
 - (vii) have conducted at least 400 hours in aeroplanes or 400 hours in helicopters of flight instructor experience toward the issuance of an Instrument Rating in aircraft of the category for which delegation is sought, considering:
 - (A) a maximum of 100 hours of credit for instructing experience on the alternate category; and
 - (B) a maximum of 100 hours credit for instructing experience on Level D Full-Flight Simulators.
 - (x) have successfully completed a biennial Instrument Proficiency Check with an authorized CASI – Flight Operations.
- (g) Flight Instructor Ratings
- (i) hold an Airline Transport Pilot Licence – Aeroplane or Helicopter or a Commercial Pilot Licence - Helicopter;
 - (ii) hold or have held a delegation as a Civil Aviation Safety Inspector, Pilot Examiner or Designated Flight Test Examiner, with the authorisation to conduct PPL and CPL flight tests;
 - (iii) hold a Class 1 Flight Instructor Rating for the appropriate category of aircraft, including:
 - (A) for aeroplanes, at least 3000 hours total flight time, at least 2000 hours of flight instructor experience that includes at least 300 hours flight instruction experience towards the flight instructor rating with a record of recommending at least 10 candidates for a Flight Instructor Rating and at least 80% of the last 10 candidates recommended passed on the first attempt; or
 - (B) for helicopters, at least 6000 hours total flight time, at least 2000 hours of flight instructor experience that includes at least 150 hours flight instruction experience towards the flight instructor rating with a record of recommending at least 5 candidates for a Flight Instructor Rating and at least 80% of the last 5 candidates recommended passed on the first attempt.
 - (iv) have a record of conducting at least thirty (30) flight tests as a PE/DFTE/CASI or ACP in accordance with applicable flight test guides without requiring repeated remediation.

- (v) agree in every case, to have his or her Class 1 Flight Instructor Rating renewed by means of a flight test conducted by an authorized CASI – Flight Operations.

3.8 How to Apply for a PE Accreditation

- (1) Ensure you meet the minimum requirements, then:
 - (a) Submit your request for consideration as a PE to the Transport Canada Regional Office, indicating the need for your services; and
 - (b) Obtain a written recommendation from a CASI – Flight Operations, with similar qualifications and experience on the same category of aircraft, who is authorized to conduct flight tests pursuant to Part IV of the CARs, and who has been personally acquainted with your work, standards and integrity for at least one year.

3.9 Accreditation Process

- (1) Once need has been confirmed, selection of a PE, other than for Flight Instructor Ratings, will be based on the availability of a suitably qualified person. An examiner candidate must:
 - (a) successfully complete a pre-training assignment;
 - (b) successfully complete standardization training conducted by an authorized CASI;
 - (c) successfully complete a Pilot Examiner Monitor with an authorized CASI;
 - (d) attend a Transport Canada Pilot Examiner Workshop prior to or as soon as practical following accreditation.
- (2) The Issuing Authority responsible for Flight Operations will issue a Letter of Accreditation stating the terms and conditions of the accreditation.

3.10 Accreditation Process – Flight Instructor Rating Only

- (1) Interested persons will complete an application form titled “Application to Qualify for the Pilot Examiner Pool - Flight Instructor Rating” posted on the Transport Canada Internet website at: http://tcapps/wwwdocs/Forms/26-0652_0712-03_BO_X.pdf
- (2) The completed application is forwarded to Transport Canada, Flight Training – AARTFE, 6th Floor, 330 Sparks Street, Ottawa, Ontario K1A 0N8 in a sealed envelope noted “Application to the Pilot Examiner Pool”.
- (3) All applications are evaluated on a case-by-case basis, categorized and scored in accordance with established rating criteria. Applicants meeting the requirements are entered in a pool of potential Pilot Examiners for a period of two (2) years, after which applicants must reapply on their own initiative. Qualified applicants will receive a letter advising them of acceptance to the pool. Applications will be returned to unqualified applicants that do not meet the mandatory criteria.
- (4) When a Regional Office determines a need for a particular area or location, the names of the top three (3) candidates in the pool, available for the area, will be forwarded for consideration.
- (5) Upon selection of the desired candidate, the Regional Office will send public notices “**Request for Comment**” (RDIMS# 7904458) to the FTUs (including the candidate’s associated FTU) that could be affected by a new accreditation. The requests will require a written response within 30 calendar days of the mailing for consideration. A written recommendation from a CASI – Flight Operations who has been personally acquainted with the candidate’s work, standards and integrity for at least one year is required to complete the selection process.
- (6) After consideration of information received, the Issuing Authority responsible for Flight Operations may authorize the training of the successful examiner candidate.

- (7) Upon successful completion of the required training, the regional Issuing Authority responsible for Flight Operations will issue a Letter of Accreditation to the examiner candidate stating the terms and conditions of the accreditation.

3.11 Pilot Examiner Training

(1) Pre-training assignment

- (a) The pre-training assignment is based on the following references, as appropriate to the aircraft category:
- (i) Ultra-light Aeroplane, RPP(A), PPL(A) & (H), CPL(A) & (H) and Multi-Engine Class Rating(A):
 - (A) Pilot Examiner Manual (TP14277);
 - (B) Canadian Aviation Regulations - Part IV and Part VI;
 - (C) Flight Test Guide – Ultra-light Aeroplane (TP13984);
 - (D) Flight Test Guide - Recreational Pilot Permit - Aeroplane (TP12475);
 - (E) Flight Test Guide - Private Pilot Licence -Aeroplane (TP13723);
 - (F) Flight Test Guide - Commercial Pilot Licence – Aeroplane (TP13462); or
 - (G) Flight Test Guide –Private and Commercial Pilot Licence - Helicopter (TP3077);
 - (H) Flight Test Guide - Multi- Engine Class Rating - Aeroplane (TP219);
 - (I) Flight Instructor Guide – Multi-engine Class Rating (TP11575);
 - (J) Flight Instructor Guide – Aeroplane (TP975); or Flight Instructor Guide – Helicopter (TP4818).
 - (ii) Instrument Rating
 - (A) Pilot Examiner Manual (TP14277)'
 - (B) Canadian Aviation Regulations - Parts IV and VI'
 - (C) Flight Test Guide - Instrument Rating – Groups 1, 2 and 3 (TP9939)'
 - (D) Flight Test Guide – Instrument Rating – Group 4 (TP15099)'
 - (E) Canada Air Pilot – General and Approach Charts and Canada Flight Supplement'
 - (F) AIM Aeronautical Information Manual – Canada'
 - (G) Advisory Circular (AC) 401-004 Second Edition – Conduct of Instrument Proficiency Checks.
 - (iii) Flight Instructor Rating
 - (A) Pilot Examiner Manual (TP14277);
 - (B) Canadian Aviation Regulations - Parts IV and VI;
 - (C) Flight Test Guide Private Pilot Licence - Aeroplane (TP13723);
 - (D) Flight Test Guide Commercial Pilot Licence – Aeroplane (TP13462); or
 - (E) Flight Test Guide –Private and Commercial Pilot Licence - Helicopter (TP3077);
 - (F) Flight Test Guide – Flight Instructor Rating (TP5537);
 - (G) Flight Instructor Guide – Aeroplane (TP975); or Flight Instructor Guide – Helicopter (TP4818); and

(H) Aeroplane Flight Training Manual (TP1102); or Helicopter Flight Training Manual (TP9982).

(2) Briefing

- (a) The candidate will schedule an appointment with an authorized CASI – Flight Operations to review the pre-training assignment and receive a thorough and structured briefing on the conduct of flight tests.
- (b) The briefing will include, without being limited to, the following subjects:
 - (i) Examiner's Roles and Responsibilities;
 - (ii) Principles of Evaluation;
 - (iii) Pre-flight test Administration;
 - (iv) Flight test ground portion activities;
 - (v) Flight test flight portion activities;
 - (vi) Post-flight activities;
 - (vii) Flight Test Report completion and distribution;
 - (viii) Other regional concerns.

(3) Practical Training

- (a) General - The information noted below outlines general training requirements for the practical portion of the training. Retired CASIs, who have held authorization to conduct Part IV flight tests and are applying for PE accreditation, might only require update training to demonstrate the competence required by Advisory Circular AC-408-001.
- (b) RPP(A), PPL(A) & (H), CPL(A) & (H), Multi-Engine Class Rating (A) and Instrument Rating (A) & (H) – Practical Training:
 - (i) The practical training of an examiner trainee is done in two phases:
 - (A) Phase One - The trainee observes a mock flight test conducted by a qualified CASI.
 - (B) Phase Two - The trainee conducts one or more mock flight tests while being observed by a qualified CASI.

(4) Formal flight tests should not be conducted with licensing candidates for the purpose of training a PE for a new authority. If a four-seat aircraft is available, a CASI may be a third occupant on board for the final monitoring of the PE candidate conducting a flight test. In such cases, the CASI is considered a "crew member" in accordance with section 101.01 of the CARs – Interpretations, which states " **crew member** means a person assigned to duty in an aircraft during flight time." When a third occupant is on board for flight tests in:

- (a) an aeroplanes, no stalls, spirals, spins, unusual attitudes, simulated emergencies or malfunctions will be conducted.
- (b) a helicopters, no unusual manoeuvres, simulated emergencies or malfunctions will be conducted.

(5) Training and monitoring flight tests for an examiner seeking RPP, PPL and CPL authorities should be conducted with a mock candidate or simulated with the CASI role-playing as a candidate. Mock candidates should be persons nearing completion of their training for, or have recently acquired, the licence or rating for which examiner authority is sought. For safety reasons, examiner training for a multi-engine class rating authorization should be conducted with a CASI role-playing as a candidate with no other person aft of the pilot seats.

(6) In the case of a two-seat aircraft, the in-flight training will be conducted by a CASI acting as a mock candidate.

- (7) Pilot examiners seeking authority to conduct instrument rating or flight instructor rating flight tests may be trained or monitored by observing all or part of a formal licensing flight test. The options of using a mock candidate or a CASI role-playing as a candidate are also available.
- (8) Flight tests for the purpose of examiner training will only be conducted with the voluntary consent of mock candidates and, where applicable, the consent of the Chief Flight Instructor of the Flight Training Unit (FTU). The pilot-examiner trainee will conduct the monitored flight test as an examiner. The applicable flight test guides will be used to conduct the flight test and assess the performance of the “flight-test mock candidate or role-playing CASI”. At the end of the test, the trainee will debrief the CASI without the mock candidate being present. The examiner trainee and the CASI will compare marks and resolve any significant differences. If both agree on the outcome of the flight test, the trainee will debrief the mock candidate on their performance during the test, noting strengths, weaknesses and adherence to the qualification standards. Should the CASI not agree with the trainee’s assessment, the CASI will do the debriefing.
- (9) When the CASI is satisfied that the pilot-examiner trainee meets an acceptable level of flight-testing performance, a recommendation to issue the applicable pilot examiner accreditation will be made to the Issuing Authority responsible for Flight Operations.
- (10) Role-Playing
 - (a) CASIs may role-play the part of a candidate, using their experience to develop realistic scenarios to sample an examiner’s evaluation skills and judgement during the ground and flight portions of a flight test. Scenarios should include exercises in which performance is simulated to be:
 - (i) well executed during a test;
 - (ii) executed with minor or major errors during a test; and
 - (iii) executed with critical errors during a test.
- (11) Although a majority of the practice flight tests are conducted in an aircraft, some practice flight tests may be conducted in:
 - (a) a certified Level 3, 5 or 6 flight training device (FTD) having a visual system appropriate to the task being evaluated;
 - (b) a flight training device (FTD) with IFR renewal certification; or
 - (c) a certified full-flight simulator.
- (12) In-flight training with the CASI as a Mock Candidate is required if a two-seat aircraft is used. A CASI must be present to observe all activities for practice flight tests conducted by the examiner trainee until such time as the examiner trainee is accredited.
- (13) The flight test guide will be used to conduct the flight test and assess the performance of the mock flight test candidate. The CASI will determine which scenario best meets the needs of the examiner trainee and the FTU where the training will take place.

3.12 Letter of Accreditation

General

- (1) Following the successful completion of a pilot examiner designee’s training and initial monitor, the Issuing Authority responsible for Flight Operations may issue a Letter of Accreditation, pursuant to Part 1, Section 4.3(1) of the *Aeronautics Act*. The letter states the flight testing authorities, the expiry date of the accreditation, appropriate Authorized Person privileges and any other appropriate regional conditions of issuance, such as the geographical area within the Region where the pilot examiner is authorized to provide flight testing services.
- (2) The letter includes an attached “**Agreement between the Minister and the Pilot Examiner**” (template - RDIMS 6666875) stating:

- (a) that the person understands that an accreditation as a Pilot Examiner may be cancelled or suspended for breach of a condition of issuance, administrative reason or for any other reason set out in sections 6.8 to 7.1 of the *Aeronautics Act* or in the *Canadian Aviation Regulations*;
- (b) that the person understands that a valid Commercial Pilot Licence or Airline Transport Pilot Licence aviation document with valid medical certification and required rating(s) must be held to exercise the privileges of the accreditation;
- (c) that the person understands, accepts and will carry out the following privileges, duties and functions of the Minister to:
 - (i) ensure that a flight test candidate meets the prerequisites pursuant to subpart 408 of the CARs- Conduct of Flight Tests as described in the applicable Flight Test Guide(s);
 - (ii) ensure that aircraft used for flight testing for the applicable permits, licences or ratings meet the requirements of:
 - (A) Section 602.07 of the CARs – Aircraft Operating Limitations – aircraft operated in accordance with the limitations set out in the AFM/POH, and other approved data with regard to the operating envelope and the type of flight (Day/Night/VFR/IFR), appropriate to the licence or rating sought;
 - (B) Section 605.06 of the CARs- Aircraft Equipment Standards and Serviceability – aircraft and required equipment meet the applicable standards of airworthiness and are serviceable and functioning, where required by operational circumstances;
 - (C) Section 425.23 of the CARs- Training Aircraft Requirements – aircraft must be at least a two-place aircraft with normal dual functioning flight controls, having the minimum required functioning instrumentation, communication and radio navigational equipment required for the type of flight authorized by the privileges of the licence or rating for which the flight test is intended.
 - (iii) exercise all reasonable duty of care to ensure safe flight by intervening or taking control of an aircraft when any action or lack of action by a candidate jeopardizes safety;
 - (iv) assess a flight test candidate's performance in accordance with the standards expressed in the applicable Flight Test Guide;
 - (v) conduct flight tests in accordance with Subpart 408 and the techniques and procedures prescribed in the Pilot Examiner Manual (TP14277) and the applicable Flight Test Guide(s);
 - (vi) avoid the possibility or perception of a conflict of interest while acting on behalf of the Minister;
 - (vii) work harmoniously with the public and avoid any action that may reflect negatively towards or discredit Transport Canada; and
 - (viii) complete all administrative requirements as outlined in the Pilot Examiner Manual.
- (d) that the person accepts the responsibility to advise Transport Canada of a failure by a candidate to meet the qualification requirements of the Personnel Licensing Standards for renewal of a valid flight instructor rating;
- (e) **if the person is delegated the authority to conduct flight tests for Flight Instructor Ratings**, the person agrees, without exception, to renew his/her Class 1 Flight Instructor Rating by means of a flight test conducted by an authorized Civil Aviation Inspector,.

Note: The conditions expressed in (a) through (e) above will be included in the agreement attached to the Letter of Accreditation (RDIMS 6666875). The agreement will be issued in duplicate and duly signed by the Issuing Authority responsible for Flight Operations and the Pilot Examiner

designee. Once signed, the PE designee will return the original to the Issuing Authority and retain his/her copy.

Authorized Person's Privileges

- (1) Pilot examiners authorized to conduct multi-engine class rating; instrument rating or flight instructor rating flight tests may be delegated Authorized Person's privileges on their Letter of Accreditation.

Area of Accreditation

- (1) The Letter of Accreditation will specify the Transport Canada Region within which an examiner is authorized to conduct flight tests. The letter may specify boundaries or radii from the examiner's current address or from economic centres within a Region, and/or limit the accreditation to the period of employment with a specified FTU Operator.
- (2) Flight tests may be conducted on qualified candidates regardless of their address or where they received training.
- (3) The conduct of a flight test in another Region must have the prior approval of the Issuing Authority responsible for Flight Operations for that other Region.
- (4) The conduct of a flight test outside of Canada or outside the constraint boundaries specified in the Letter of Accreditation must have the prior approval of the Issuing Authority responsible for Flight Operations for the Region that issued the Letter of Accreditation.

Duration of Accreditation

- (1) Accreditations and renewals for ultra-light aeroplane examiners will coincide with the valid-to-date of the Flight Instructor Rating held.
- (2) All other initial Pilot Examiner accreditations will expire at 23:59 on the first day of the thirteenth (13th) month following the date of accreditation.
- (3) All other accreditation renewals will expire at 23:59 on the first day of the twenty-fifth (25th) month following the date of renewal.

3.13 Renewal of Accreditation

- (1) The Pilot Examiner has a responsibility to request renewal of an accreditation before it has expired. The Transport Canada Regional Office, or nearest TCC, should be advised in writing of the Pilot Examiner's intention to renew, at least 90 days prior to the expiry date of the accreditation. If a request is not received, Transport Canada will assume that the examiner does not wish to renew the accreditation.
- (2) The examiner must meet the requirements for initial accreditation when an accreditation has been invalid for more than 24 months.
- (3) All examiners requesting renewals of accreditation will be subject to the following requirements:
 - (a) having a continuing need at a particular location;
 - (b) continuing to meet the requirements for initial accreditation;
 - (c) having honored the conditions of issuance of an accreditation during the previous period of accreditation;
 - (d) having conducted flight tests in accordance with the terms and conditions stipulated in the Letter of Accreditation and the Agreement with the Minister;
 - (e) having successfully completed a Pilot Examiner Workshop at least every two years;
 - (f) having maintained a good record as a pilot and flight instructor in regard to accidents, incidents and violations;
 - (g) having maintained a reputation for integrity and dependability in the aviation industry and the community;

- (h) having maintained a history of constructive interaction with Transport Canada; and
- (i) having successfully completed a monitoring event in accordance with the recurrent monitoring policy of Advisory Circular AC-408-001 and this manual with an authorized CASI, for one group of authorities held. Authorities may be grouped as follows:
 - (i) for aeroplanes:
 - (A) Passenger Carrying Rating - Ultra-light Aeroplane;
 - (B) Recreational Pilot Permit – Aeroplane, Private Pilot Licence, Commercial Pilot Licence;
 - (C) Multi-engine Class Rating - Aeroplane, Instrument Rating;
 - (D) Flight Instructor Rating.
 - (ii) for helicopters:
 - (A) Private Pilot Licence or Commercial Pilot Licence;
 - (B) Instrument Rating;
 - (C) Flight Instructor Rating.

Note: When a PE holds more than one group of authorities, recurrent monitoring may alternate amongst the groups every two years.

3.14 Cancellation, Suspension or Refusal to Renew

- (1) Pursuant to 7.1(1) of the *Aeronautic Act*, the Issuing Authority responsible for Flight Training may cancel an examiner's accreditation on the basis of any of the following:
 - (a) a record of conviction of an offence punishable on summary conviction under 7.3 of the *Aeronautics Act* or the CARs; or
 - (b) evidence of malpractice or fraudulent use of the designation.
- (2) Pursuant to 7.1(1) of the *Aeronautic Act*, the Issuing Authority responsible for Flight Training may suspend or refuse to renew an examiner's accreditation on the basis of any of the following:
 - (a) upon the written request of the pilot examiner;
 - (b) when there is no longer a need for the pilot examiner's service;
 - (c) a record of violation of the Canadian Aviation Regulations resulting in one or both of the following penalties:
 - (i) an administrative monetary penalty assessed in accordance with sections 7.6 to 8.2 of the *Aeronautics Act*, where there has been a violation of a designated provision; or
 - (ii) the suspension of a Canadian Aviation Document in accordance with section 6.9 of the *Aeronautic Act*, in respect of any contravention of a provision of Part 1 of the *Aeronautic Act*.
 - (d) the need to investigate the circumstances following an incident or accident in which the pilot examiner is implicated;
 - (e) the pilot examiner no longer complies with the conditions of accreditation regarding location within a Transport Canada Region or affiliation with a flight training unit (FTU), as applicable;
 - (f) failure to attend required Pilot Examiner Workshops;
 - (g) in the case of a Pilot Examiner with an ultra-light authority, failure to maintain a Flight Instructor Rating – Ultra-light Aeroplane;

- (h) in the case of a Pilot Examiner with RPP(A), PPL, CPL or Flight Instructor Rating authority, failure to maintain a Class 1 Flight Instructor Rating.
 - (i) in the case of a Pilot Examiner with Instrument Rating authority, failure to maintain a valid Instrument Rating.
 - (j) the need for repeated direction in the proper conduct and administration of flight tests;
 - (k) unacceptable performance in any phase of pilot examiner duties or responsibilities, including the inability to accept or carry out the supervising Regional Office's instructions or counseling;
 - (l) failure to conduct flight tests in accordance with the instructions, techniques and procedures set forth in the applicable flight test guide(s) or the Pilot Examiner Manual (TP 14277);
 - (m) failure to comply with the terms and conditions set forth and agreed upon in the Letter of Accreditation and the Agreement with the Minister; or
 - (n) for any reason the Issuing Authority considers appropriate and in the public interest.
- (3) When it has been alleged that any PE has acted in a manner specified above, the Issuing Authority must ensure, prior to making a final decision in the matter, that:
- (a) a comprehensive report from a CASI who has investigated the matter has been submitted for consideration; and
 - (b) the PE and where applicable, the candidate in question have been given a formal opportunity to respond to the allegations, either verbally or in writing.
- (4) If the decision of the Issuing Authority is to suspend, cancel or refuse to issue the PE's authority, a notice of suspension or cancellation or refusal to issue must be issued directly to the individual PE in accordance with SI-SUR-014 pursuant to section 7.1(1)(b) or (c) of the *Aeronautics Act*. A PE is entitled to procedural safeguards under the *Aeronautics Act*, including recourse to the Transportation Appeals Tribunal of Canada (TATC)

3.15 Reinstatement of Accreditation

- (1) The Issuing Authority may consider the reinstatement of suspended accreditation at any time deemed appropriate where it is in the interest of need and service to the public. The criteria for initial accreditation will have to be met.

3.16 Request for Review

- (1) A "Letter of Accreditation" as a Pilot Examiner is a Canadian Aviation Document (CAD). The powers to suspend, cancel or refuse to renew a CAD are set out in the *Aeronautics Act*, as amended.
- (2) The four distinct grounds for the powers are as follows:
 - (a) suspend or cancel for contravention of any provision in Part 1 of the *Aeronautics Act* or the regulations made under the Act [e.g. the Canadian Aviation Regulations (CARs)];
 - (b) suspend on the grounds that an immediate threat to aviation safety exists or is likely to occur;
 - (c) suspend, cancel or refuse to renew on the grounds of:
 - (i) incompetence;
 - (ii) ceasing to meet the qualifications or to fulfill the conditions of issuance of the document; or
 - (iii) public interest reasons.
 - (d) suspend or refuse to renew for failure to pay monetary penalties for which the Tribunal has issued a certificate of non-payment.

- (3) The document holder has the right to request a review of the Minister's decisions to suspend, cancel, or refuse to issue or renew a CAD by the Transportation Appeal Tribunal of Canada (TATC).
- (4) The TATC may be contacted at:
 - (a) Transportation Appeal Tribunal of Canada, 333 Laurier Avenue West, 12th Floor, Room 1201, Ottawa, ON, K1A 0N5, Tel. (613) 990-6909 or FAX (613) 990-9153.

3.17 Pilot Examiner Responsibilities

- (1) Continuing Qualification
 - (a) When a Pilot Examiner is faced with a temporary loss of qualification due to medical status, eye operations, stress, etc., the examiner must notify the Regional Pilot Examiner Coordinator to report the circumstances.
- (2) Role
 - (a) A Pilot Examiner is an experienced professional who is trained to assess pilot performance against a national standard and who ensures that all persons applying for a pilot licence or rating, for which a flight test is required, meet the practical knowledge and skill requirements.
- (3) Prompt Service
 - (a) Pilot Examiners are appointed to provide a prompt flight test service to any candidate who meets the experience requirements for that test and who has been recommended for a flight test by a qualified person, regardless where the training took place.
 - (b) An examiner is expected to honour appointments unless circumstances warrant cancellation or postponement. It is the examiner's responsibility to reschedule a flight test, if the postponement is at the examiner's request. If an examiner cancels a flight test without rescheduling, the examiner should recommend another examiner or instruct the candidate to contact the closest TCC or the Regional Office. The TCC/Regional Office should provide the names of other examiners, or may arrange to have a CASI conduct the flight test at a mutually acceptable date and time.
- (4) Flight Test Service
 - (a) Pilot Examiners are professionals who can be counted on to be on time and to be well organized and business-like in their conduct of flight tests. As Agents of the Minister, pilot examiners are expected to be polite and respectful toward flight test candidates and are expected to do their best to put candidates at ease and avoid intimidation. The public has a duty to report examiners that display inappropriate unprofessional behaviour, such as yelling or rudeness, to the nearest Transport Canada Centre.
- (5) Prompt Forwarding of Flight Test Reports
 - (a) Original flight test reports (pass or fail) are to be forwarded to the Transport Canada Regional Office or TCC within 5 working days after the flight test. A duplicate copy is to be retained in a file maintained by the pilot examiner. The Pilot Examiner's file copy is to be kept for not less than 24 months after the flight test date. This file is subject to review by CASIs and is to be made available upon reasonable notice.
 - (b) In the event of a failed flight test, the pilot examiner will give the candidate a copy of the completed flight test report. Flight tests that are converted into a dual flight because of unsatisfactory performance are to be considered a failed flight test. The practice of holding the report of a failed flight test until a subsequent flight test has been successfully completed is unacceptable.

3.18 How Standardization is achieved

- (1) Transport Canada has a responsibility to exercise due diligence on behalf of the Minister of Transport to ensure that persons holding an accreditation, pursuant to Part 1 Subsection 4.3(1) of the *Aeronautics Act*, retain the required competence, professionalism and standardization to exercise their delegated duties.
- (2) Standardization is achieved through the following events:
 - (a) a Pilot Examiner Workshop conducted by the Transport Canada Region every 2 years based on material developed and provided by Transport Canada Headquarters – Pilot Training and Licensing;
 - (b) a monitoring event during the first year, then recurrent monitoring every 2 years thereafter; and as required
 - (c) special monitoring.
- (3) Following the completion of the Pilot Examiner workshops, the Regions will send their feedback and a copy of the participant feedback to TC Headquarters to assist in further development and improvement of the flight test guides and the Pilot Examiner Manual.
- (4) Pilot Examiners are required to complete open-book assignments and participate at pilot examiner workshops. A record of the successful completion of workshops will be entered in the examiner's Transport Canada's Flight Training and Aeronautical Education (FTAE) database file.
- (5) When conducting a monitor, Civil Aviation Safety Inspectors (CASI) – Flight Operations must always use their knowledge and experience to ensure a fair and accurate assessment of the PE in accordance with Advisory Circular AC-408-001 – Pilot Examiner (PE) Monitoring Procedures – Aeroplane and Helicopter and Staff Instruction SI-SUR-020 – Pilot Examiner Monitoring Procedures.
- (6) The following objectives in order of importance are desired for every PE monitor:
 - (a) ensure that the PE meets the standard for delegation of testing authority from the Minister;
 - (b) provide feedback to the PE on their performance and provide suggestions for improvement, as required;
 - (c) ensure that the PE follows the policies in the PE Manual and the applicable Flight Test Guide(s);
 - (d) ensure that the PE is aware of changes to the Pilot Examiner Program;
 - (e) ensure that the PE is aware of changes affecting flight tests such as instrument flight rules and procedures, etc.

3.19 Recurrent Monitoring

Note: The expiry date of a monitor might not coincide with the expiry date of the Letter of Accreditation.

- (1) The purpose of recurrent monitoring is to verify that a uniform standard is applied during the conduct of flight tests for the application of performance standards and the evaluation of a candidate's skills. Monitoring checks may be conducted in an aircraft or in an appropriate flight simulation training device.
- (2) Where a PE is authorized to conduct flight tests for more than one group of licences or ratings, the test on which the monitor is conducted will be at the discretion of the Issuing Authority. One monitoring event will cover all licences and ratings, unless the Issuing Authority requests otherwise.
- (3) A recurrent monitoring event will be completed during the first year of accreditation. After the first year of accreditation, the validity period of a PE monitor will expire on the first day of the twenty-fifth month following the month in which the PE monitor was completed. Where a PE monitor is renewed within the last 90 days of its validity period, the validity period is extended by 24 months from the original expiry date.

- (4) The pilot examiner is required to contact an authorized CASI at least 90 days prior to expiration for completion of a monitoring event. The pilot examiner will arrange, with the CASI, a mutually convenient date and time. Should the pilot examiner not be able to make the necessary arrangements, the CASI will arrange a monitoring event.
- (5) Where the validity period of a PE monitor is renewed after the initial expiry date, the new monitor will expire on the first day of the twenty-fifth month following the date on which the PE monitor was completed. The following conditions regarding extensions or temporary suspension of flight testing will apply:
 - (a) Where a Pilot Examiner has requested a monitoring event **prior** to the expiration of the previous monitor, the Issuing Authority has the discretion to extend the validity period of a PE monitor once (*only 1 extension*) between monitoring events using one of the following options:
 - (i) A period of up to 90 days; or
 - (ii) A period of up to 24 months, after due consideration of a performance review of data from the PE's previous two years of flight testing activities and a risk management process in accordance with Staff Instruction (SI) QUA-008 – Risk Management Process for Aviation Safety Activities.
 - (b) Where a Pilot Examiner has requested a monitoring event **after** the expiration date of the previous monitor, but has not conducted any unauthorized flight tests while expired, the Issuing Authority may issue an interim authority for a period of up to 90 days, while awaiting the completion of a monitoring event;
 - (c) Where a Pilot Examiner has not requested a monitoring event prior to the expiration of the previous monitor and has conducted an unauthorized flight test while the monitoring event was expired, the Issuing Authority will issue a suspension of the Letter of Accreditation until a monitoring event is completed. Further, a remark will be entered in the examiner's FTAE file indicating that a 24 month extension is not available until after the next recurrent monitoring event.

Note: Flight tests conducted while recurrent monitoring is expired will be flagged during the scanning of flight test reports and will trigger remedial action by Transport Canada.

- (6) The CASI and PE will meet at the beginning of the monitoring event to discuss the PE's previous performance pertaining to data collected from the FTAE database. The meeting will also establish the sequence of procedures to be demonstrated and to delineate the extent of the CASI's input.
- (7) During a PE monitor, the CASI will ensure that:
 - (a) the PE is acting within the limits of his or her authority;
 - (b) the PE's Flight Test Reports are complete, accurate and meaningful;
 - (c) the PE's conduct of flight tests is fair and in compliance with the standards and procedures described in this manual and relevant flight test guides;
 - (d) the PE covers the required flight test items/sequences in accordance with the applicable flight test guides; and
 - (e) the PE's administrative procedures regarding the issuance of permits, licences, multi-engine class ratings, instrument ratings or flight instructor ratings conform to the requirements specified in the Authorized Person's Training Program.
- (8) Monitoring flight checks are to be conducted in the following manner:
 - (a) Pilot examiners holding authorities for the conduct of instrument ratings and/or the flight instructor ratings may be monitored by observing all or part of a formal licensing flight test in accordance with 3.11 (a) or (b). The options of using a mock candidate or a CASI role-playing as a candidate are also available.

- (b) Pilot examiners holding authorities for RPP, PPL, CPL and Multi-Engine Class Rating will be monitored by means of a sampling flight test with a mock candidate; or a flight in which a CASI plays the role of a flight test candidate to assess the examiner's proficiency and ability to evaluate a sampling of flight test items appropriate to the authorities held.

Note: Having CASI's riding in a second row seat for Multi-engine Class Rating flight tests or monitors is not recommended for safety reasons.

- (c) Pilot examiners holding authorities for the Multi-Engine Class Rating may be monitored for several of the flight test items using a mock candidate or a CASI role-playing as a candidate in a **Level 5** Flight Training Device configured to replicate a specific type of multi-engine aeroplane.
- (d) The flight test items for a sampling flight test will be selected based on the following criteria:
 - (i) any new flight test item described in flight test guides, as amended from time to time;
 - (ii) any item having a low national success rate;
 - (iii) flight test items that have been identified through flight test data analysis as items requiring review because of:
 - (A) passing rates considerably above or below the national averages;
 - (B) remarks not supporting evaluations;
 - (C) the presence of weak instructional technique as revealed through analysis of flight test performances by candidates that were recommended by the examiner.
 - (iv) training or testing areas that have generated disputes or appeals brought to Transport Canada's attention.
- (9) The PE's debriefing skills and attitudes will be evaluated in all cases. However, in the case of instrument or instructor rating formal flight tests, upon completion of the test items, the CASI and PE will meet privately to review and concur on the results of the flight test. Should a disagreement arise between the CASI and PE on the outcome of the evaluation, the CASI's evaluation will take precedence over the PE's and will be used to debrief the candidate.
- (10) After each PE monitor, the CASI will complete a PE Monitor Report (Advisory Circular – AC-408-001 - PE Monitor Procedures – Appendix A) and will ensure that a copy of the report is provided to the PE and a copy placed on the PE's TC Regional file.
- (11) When a PE holds more than one group of authorities, recurrent monitoring may alternate amongst the groups every two years, except in the case of a Group 4 instrument rating.
- (12) The Issuing Authority will ensure that the PE's electronic files within FTAE are updated with the latest PE monitor report date.
- (13) If a monitor indicates a deficiency in the conduct of flight tests or application of standards, the CASI will note the deficiency and document educational or remedial action taken to remedy the matter. Where a PE fails to meet the required skill assessment during the monitor, the PE's monitor will be deemed to have lapsed and the PE will be advised of the available avenues for appeal, should a disagreement arise.
- (14) Suspension of the PE's authority, if considered, must have the concurrence of the Issuing Authority. PE privileges will be suspended until the remedial training determined by the Issuing Authority is completed and a subsequent monitor is successfully completed.

3.20 Special Monitoring

- (1) Transport Canada Headquarters conducts continuous monitoring of PE performance through the collection of data from various sources. This is done in order to manage the PE delegation program on a data driven risk management basis.

- (2) Using the principles of standard deviation against a national norm, Transport Canada Headquarters generates performance data on a national, regional and individual basis as part of the PE monitoring program. This analysis approach establishes a national performance standard to which PEs are held.
- (3) The monitoring data is shared with the region on a monthly basis for the purposes of ensuring that any PE performance deficiencies are identified and dealt with promptly. Where necessary special monitoring shall be implemented by the Regions to bring PE performance within the accepted national norms.
- (4) The Issuing Authority has the discretion to invoke special monitoring at any time:
 - (a) when an enhanced monitoring initiative is pursued by the Region; or
 - (b) when it is deemed necessary by the Minister.
- (5) The Issuing Authority may also invoke special monitoring when non-conformance with the Pilot Examiner Manual or applicable Flight Test Guide(s), is suspected, which may include but is not limited to:
 - (a) flight test remarks that do not support the mark awarded;
 - (b) passing rates consistently well above or below the national average;
 - (c) flight test times that are consistently much shorter or longer than the national average;
 - (d) issues or concerns that arise concerning an examiner's performance; or
 - (e) a substantiated public complaint (established by evidence) regarding the conduct of a flight test.
- (6) If a four-seat aircraft is available, a CASI may be a third occupant on board for the special monitoring of a PE conducting a flight test. In such cases, the CASI is considered a "crew member" in accordance with section 101.01 of the CARs – Interpretations, which states "**crew member** means a person assigned to duty in an aircraft during flight time." No stalls, spirals, spins, unusual attitudes or simulated emergencies or malfunctions will be conducted with a third person on board.
- (7) If a discrepancy in evaluation technique or the application of standards is found, the CASI will take brief the examiner, exercise a control measure or provide remedial training. This measure will be recorded in the FTAE system.

3.21 Maintaining Recency

- (1) Pilot examiners are expected to maintain a high degree of proficiency in flying skills, evaluation techniques and to demonstrate aviation safety at all times. Examiners must be up-to-date with the applicable flight test guides and the performance criteria imbedded in each item, as well as being up-to-date on regulatory, procedural and policy changes.
- (2) Pilot Examiners acting as pilot-in-command while flight testing must meet the recency requirements of Subsections 401.05(1), (2) and (3) of the CARs, as applicable.
- (3) Pilot examiners holding an instrument rating accreditation **must be pilot-in-command** during a flight test in order to consider the instrument flight time and approaches flown by flight test candidates for the purposes of personally meeting the requirements of subsection 401.05(3) of the CARs – Recency Requirements, [6, 6 and 6].

3.22 Liability Insurance

- (1) Pilot examiners should not accept a verbal statement from candidates indicating insurance coverage has been arranged. At the time of booking the flight test, the candidate should be advised that proof of insurance that the examiner is covered would be required prior to conducting the test. In accordance with Section 606.02 of the CARs, all privately and commercially registered aircraft are required to carry passenger liability insurance. It is important to note that this insurance does not necessarily cover the pilot examiner while conducting a flight test.

3.23 Liability – Delegated Authority

- (1) Pilot examiners receive their authority to exercise privileges on behalf of the Minister by means of a "Delegation of Authority" document. External delegates are regarded as Crown agents to the extent that they act on behalf of the Crown.
- (2) The Government of Canada, under the provisions of the *Crown Liability and Proceedings Act*, will indemnify pilot examiners against personal liability incurred by reason of any act or omission, within the scope of their duties, and will make no claim against them (for damages the Crown has to pay) based upon such personal liability, if the pilot examiner acted within the scope of the delegation, honestly, without malice and with a duty of care like every other reasonable person in their position engaged in the same activity would take. Reference: TP11825 - Liability through the exercise of Delegated Authority.

3.24 Request for Review of a Pilot Examiner's Decision

- (1) When a candidate is not satisfied with a pilot examiner's decision, a request for re-test may be forwarded to the Transport Canada Regional Office responsible for that pilot examiner. After due consideration of the individual case, the Issuing Authority responsible for Flight Operations may authorize a re-test to be conducted, without prejudice, by an authorized CASI or another PE. In such cases, the candidate will be given a complete flight test, including any items already assessed as passed on the previous test. A complete new application (where applicable) and test file must be prepared. The new flight test report determines the candidate's qualification.

3.25 Testing Examiner's Own Students

- (1) Pilot examiners may conduct tests on students they have trained, provided **another qualified flight instructor** has conducted more than 50% of the ground training (excluding ground school), such as preparatory training, pre-flight briefings and post-flight debriefings and more than 50% of the flight training, including the last 10 hours of the flight training:
 - (a) certifies that all of the tasks and manoeuvres required for the flight test have been reviewed by conducting a pre-test evaluation with the candidate; and
 - (b) recommends the candidate as having reached a sufficient level of competency to complete the flight test required for the issuance of the licence or rating sought.
- (2) If additional training is required after the pre-flight test evaluation has been conducted, an instructor other than the examiner should provide this additional training, but if the pilot examiner conducts the additional training, another qualified instructor must conduct a subsequent pre-flight test evaluation to validate a recommendation.
- (3) Under special circumstances, the pilot examiner may test his/her own student with prior permission from Transport Canada. The pilot examiner should contact the principal CASI responsible for monitoring him/her or the regional Issuing Authority responsible for Flight Operations.

3.26 Flight Tests for Initial Flight Instructor Ratings

- (1) In all cases, where more than 50% of the ground training or more than 50% of the flight training towards a Flight Instructor Rating has been conducted by the holder of a Class 1 Flight Instructor Rating and that person also holds an accreditation to conduct Flight Instructor Rating flight tests, the flight test for the initial issuance of the Flight Instructor Rating will be conducted by an authorized CASI.

3.27 Conflict of Interest

- (1) In order to avoid conflicts of interest, perceived or real, pilot examiners must follow the policy and guidelines contained in this manual.

- (2) A “Conflict of Interest” is a situation where the interest of a pilot examiner conflicts with the obligation to the public good and arises when a pilot examiner is influenced to act either knowingly or unknowingly, in a manner that does not hold the safety of the flying public as the primary and highest priority. “Conflict of Interest” may arise or be perceived through financial interests or due to the self-interest that may arise as a result of being the primary instructor for a flight test candidate. A PE must minimize the possibility or perception of a conflict of interest while conducting a flight test as he or she is acting as an Agent of the Minister.

3.28 Flight Test Results

- (1) The *Privacy Act* protects the privacy of individuals with respect to personal information held by a government institution. Flight tests measure the performance of candidates, as well as that of the recommending instructors and Chief Flight Instructors who are responsible for the training at flight training units (FTU). All of these are identified on the flight test report.
- (2) Personal information may be disclosed in accordance with Section 8(2)(a) of the *Privacy Act*, which allows disclosure... “for the purpose for which the institution obtained or compiled the information or for a use consistent with that purpose”. The purpose for which flight test information is obtained is to ensure the safety of aviation in Canada. The specific purposes are to evaluate whether a candidate meets the minimum skill standard for a licence or rating; whether the recommending instructor is performing competently as an instructor; whether the Pilot Examiner is conducting the test in accordance with the standards; and whether the flight training unit FTU is performing in accordance with the general conditions of the FTU Operator Certificate.
- (3) In accordance with 8(2)(a) of the *Privacy Act*, a copy of the flight test report may be given to the flight test candidate and a copy will be retained by the Pilot Examiner who conducted the flight test. A copy may also be given, upon request, to the flight instructor who recommended the candidate for the flight test and to the Chief Flight Instructor responsible for the quality of flight training at the FTU where the training was conducted. Specific information about the results of a flight test will not be given by Transport Canada to anyone but the individuals named on the flight test report except in accordance with the *Privacy Act*.

3.29 Security of Flight Test Results

- (1) Pursuant to the *Privacy Act*, completed flight test reports are records of personal information and as such must be treated as confidential information (PROTECTED “A”) by all parties privy to the results. Appropriate security measures must be taken to ensure that access to the documents is restricted to those rightfully in possession of them.

4.0 PRINCIPLES OF EVALUATION

4.1 Aim of the Flight Test

- (1) The aim of the flight test is to:
- (a) determine that the candidate meets the knowledge and skill requirements for the licence or rating sought;
 - (b) improve the standards of instruction and training of those exercises and procedures that are weak or commonly failed through feedback of information to the FTUs;
 - (c) ensure acceptable levels of safety are maintained and improved throughout the aviation industry by requiring the application of sound airmanship and flight discipline.
- (2) The role of an examiner is to evaluate the knowledge and skill of candidates to determine whether they meet the required standard for a permit, licence or rating. Examiners are professional, well-experienced pilots that are very familiar with the flight test for which they hold an accreditation. However, the marking or assessment decisions required to complete the evaluations on the flight test form may not be so well

known. The evaluations and the marks awarded will become more accurate and valid as a Pilot Examiner becomes more familiar with the evaluation process.

4.2 Evaluation Process

- (1) Evaluation is the process of observing, measuring and recording a candidate's performance in order to determine that the flight test guide criteria are met. Analysis of data may also be used to identify:
 - (a) student deficiencies;
 - (b) specific degrees of skill;
 - (c) areas of weak instruction; and
 - (d) areas of the training syllabus requiring improvement.
- (2) To improve the quality of training and enhance aviation safety, this information is then integrated into the training program in the form of revisions to training manuals, examinations and flight test standards.

4.3 Evaluation Cycle

- (1) The evaluation process is a five-stage cycle: objective, standards, a performance by the candidate, observation and assessment.
- (2) **Objective.** The first stage determines the objective of the flight test item. Since it would be meaningless to evaluate the student's performance without considering what that performance should be, the process of evaluation should begin with clearly defined objectives. These objectives are specified in the Aim statement for each flight test item in the applicable flight test guide. The Aim statement embodies the mandatory criteria to be achieved by the candidate.
- (3) **Standards.** To be proficient in evaluating a candidate's performance during a flight test, the examiner must be completely familiar with the standards for each item. These standards are described in the *Performance Criteria* statement for each item in the applicable flight test guide. Some of the criteria are recommended best practices, so if a criterion in this section is missed or poorly done, it should not necessarily result in a failure, unless it is also embodied within the Aim statement.
- (4) **Performance.** The examiner assigns the tasks or manoeuvres in accordance with their *Description* and observes the candidate's performance in response to the situations and instructions presented.
- (5) **Observation.** The examiner observes the performance and compares it to the performance criteria for the task or manoeuvre.
- (6) **Assessment.** Based on an observation of the candidate's performance under existing conditions, the examiner assesses the performance and assigns a mark. When a candidate commits significant errors during the performance of a task or manoeuvre or does not achieve the requirements of the Aim statement, the examiner must state the nature of the problem(s) in the Remarks column of the flight test report. To be useful, the remarks must be clear and support the mark that has been assigned.

4.4 Factors Affecting Evaluation

- (1) Comparing Candidates with each other
 - (a) When working with a group of candidates, there may be a tendency to compare one candidate to the other. It's a natural thing to do. When conducting a flight test however, compare the candidate's performance to the standard expressed in the Performance Criteria not to a person who is more or less skilled. The reason for this is, of course, to give the candidate a fair and valid flight test.

(2) Characteristics of Evaluation

- (a) An evaluation may become useless if certain principles are not respected. The following five characteristics, when used carefully in the conduct of a flight test, will result in an accurate and effective evaluation.
- (b) **Reliability** ensures consistent results. As applied to the flight test, this would mean that two identical performances should result in the same flight test score.
- (c) Human factors can have significant effect on flight test reliability. Some of these factors are:
 - (i) **fatigue** - insufficient sleep or rest prior to the test;
 - (ii) **emotions** - work or home personal problems;
 - (iii) **health** - cold, flu, etc.
 - (iv) **time of day** - very early in the morning, or last trip of the day;
 - (v) **distractions** - noise, interruptions, etc.
- (d) Examiners should be conscious of these factors and attempt to limit their effects as much as possible for they may result in a lack of smoothness or accuracy in the candidate's performance. Examiners should also be aware that their ability to accurately assess the candidate's performance could be adversely affected by these same factors.
- (e) Testing for the purpose of licensing must remain clearly removed from training in order to maintain the reliability of an evaluation. For example, a second or third attempt, in air flight test items, may give the candidate the immediate practice needed to demonstrate a manoeuvre adequately. For this reason, an item will not be repeated unless one of the following conditions applies:
 - (i) **Discontinuance.** Discontinuance of a manoeuvre for valid safety reasons; i.e., a go-around or other procedure necessary to modify the originally planned manoeuvre.
 - (ii) **Collision Avoidance.** Examiner intervention on the flight controls to avoid another aircraft that the candidate could not have seen due to position or other factors.
 - (iii) **Misunderstood Request.** A legitimate instance when a candidate does not understand an examiner's request to perform a specific manoeuvre. A candidate's failure to know the requirements of a specified manoeuvre is not grounds for repeating a task or manoeuvre.
 - (iv) **Other Factors.** Any condition where the examiner was distracted to the point that the candidate's performance of the manoeuvre (radio calls, traffic, etc.) could not be adequately observed.
- (f) **Validity** - Tests are valid if they measure what they are supposed to measure and nothing else. Assessment of ground and air items must remain within the bounds of the appropriate flight test standards. The scope of the test must be such that when candidates pass, they have met the skill requirements for the issuance of the permit, licence or rating sought.
- (g) **Comprehensive** - A test is comprehensive if it contains a sample of all course material and measures each area of skill and knowledge required to ensure the standard is met. Flight tests will be comprehensive if the examiner conforms to the items listed in the applicable flight test guide with no additions or deletions.
- (h) **Discrimination** - In testing, discrimination enables the examiner to detect different levels of achievement among candidates. Discrimination separates a standard performance from an excellent, mediocre or poor performance. For this reason examiners must take care with their requests for demonstration of various test items. The marking scale is designed to reveal how candidates perform and allows for a greater degree of discrimination than one that simply distinguishes between pass and fail. Also, the required minimum pass mark should prevent

candidates who consistently demonstrate weak performance throughout the flight test from passing.

- (i) **Objectivity** - Objectivity ensures the examiner's personal opinions will not affect the outcome or assessment of the test. Marks awarded must be made in accordance with the applicable performance criteria. Flight test marks are influenced to some degree by subjective opinions. Assessments will be more valid, less subjective, if the examiner is an experienced pilot, has sound and adequate background knowledge of the evaluation process and the expertise to accurately assess flight test applicants without prejudice.

4.5 Evaluation Errors

- (1) In order to test effectively, the examiner requires not only a sound knowledge of the characteristics of evaluation, but also a firm understanding of the possible errors that can occur throughout the evaluation process. Errors in evaluation fall into several categories.
- (2) Personal Bias Error
 - (a) Examiners must conduct all flight tests in accordance with the standards expressed in the applicable flight test guide. An examiner must not allow personal prejudices to interfere with the objective evaluation of a candidate's performance.
- (3) Central Tendency Errors
 - (a) Central tendency errors are indicated by a tendency to rate all or most candidates as average.
 - (b) On the other hand, the examiner is reluctant to cope with the possible emotional response of a candidate or a recommending instructor. This results in padded or inflated assessments of poor performance. This error may also occur because an examiner does not want to put effort into making a decision. An average mark is easier to defend.
- (4) Generosity Errors
 - (a) Generosity errors are indicated by a tendency to rate all individuals at the high end of the scale and are probably the most common type of personal bias. This could be caused by an examiner's desire to be the preferred examiner.
- (5) Severity Errors
 - (a) In this case, all or most candidates are graded at the low end of the marking scale. Examiners may feel that the published standards are too low and score the test against their own set of standards. This type of examiner feels that few people can fly as well as they can.
- (6) Halo Effect Errors
 - (a) This occurs when an examiner's impression of a candidate is allowed to influence the assessment of performance. Halo error can result in rating an applicant too high or too low. One form of halo error is the error of leniency.
 - (b) The error of indulgence falls into this category. Leniency has its source in an examiners likes, dislikes, opinions, prejudices, moods and political or community influence of people. For example, when testing a friend, acquaintance, or high profile individual, an examiner may give undeservedly high marks or, conversely the error of stereotype.
- (7) Stereotype Errors
 - (a) As with the error of leniency, the error of stereotype has its source in likes, dislikes, opinions, prejudices, etc. In this case, however, an examiner may allow personal opinion or prejudice to influence the assessment of the candidate and award undeservedly low marks or high marks.
- (8) Logical Error
 - (a) Logical error occurs when an examiner assumes that a high degree of ability in one area means a similar degree of competence in another. This is especially true if the two items being assessed

are similar or related. A good mark on one or two items does not mean the candidate is also qualified on all items. The full test must be completed and marked.

(9) Error of Narrow Criterion

- (a) This may occur when an examiner has a group of candidates to test. The examiner may, under this condition, rate each applicant against the others within the group instead of against the published criteria. If the group to be tested is above average, a candidate who is of average ability may be awarded an undeservedly low mark. If the group of candidates to be tested is below average, then a candidate who performs the best within this group may be awarded a higher assessment than actually deserved.

(10) Error of Delayed Grading

- (a) This type of error occurs when there is a delay in the assessment of an item, resulting in a tendency to award average marks due to the lack of information and/or poor recall. The use of the top or bottom end of the marking scale would be avoided. By not making an assessment immediately after the event, examiners may award assessments based upon an overall impression of the flight test. This results in an erroneous assessment and a flight test report that is of little value to the training system.

(11) Standards Error

- (a) All the errors we have discussed result in a standards error. However, if an examiner is not thoroughly familiar with established standards, as outlined in the applicable flight test guides, it is virtually impossible to conduct an evaluation to that standard.
- (b) While these errors may appear obvious on paper, they may not be under flight-test conditions, especially as the judgment of the examiner may be obscured by a combination of two or more. Examiners must, therefore, be aware of these errors to consciously prevent them from influencing the validity of the tests they conduct

4.6 Oral Questions

- (1) The examiner uses oral questions to measure and evaluate the extent of aeronautical knowledge and to determine that the candidate meets the standard of knowledge required for the licence or rating being sought.
- (2) This is an important part of the flight test and it is the portion of flight testing that results in the greatest variance in standardization. For this reason it is essential that questions be prepared beforehand to ensure that they are worded correctly and that they are relevant and valid.
- (3) It is recommended that the examiner have a bank of questions prepared for all the required items of the oral portion of the test. It is not intended that all of the questions prepared be asked but the additional questions will be available, if required. Moreover, a bank of questions will allow the examiner to vary the oral portion of the test somewhat, from candidate to candidate.
- (4) The prepared questions should be of a practical operational nature, based upon the aircraft and the trip assigned for the flight test. Theoretical type questions are not recommended on the flight test as this area is covered by the written examinations.
- (5) In preparing questions, it is recommended that you first write down the correct answer and then write a question that will elicit only that answer.
- (6) Questions should be carefully worded and not ambiguous. Good questions are easily understood and composed of common words. They should measure knowledge, not the use of language. Big words and high sounding phraseology may allow the examiner to display command of language and vocabulary but only detract attention from the test. If candidates cannot understand the meaning of the words, they will not be able to answer the question. Therefore, examiners must keep the vocabulary within the grasp of candidates.

- (7) To make sure that the candidate understands the question, familiar terms and words should be used. The situation and conditions must be clear, to give the candidate the chance to answer correctly.
- (8) A question should center on one idea only. The examiner can guide the candidate through a complex procedure by asking “what”, “why”, “where”, “when” and “how” questions after the basic question has been asked. Example of a basic question: What is meant by the term VFR in aviation? Answer: Visual Flight Rules. Next question might be: Is the weather VFR for today’s flight?
Note: This requires a YES/NO answer, but you could follow up with – How do you know? Etc.
- (9) Keep questions as practical as possible. A flight test is an operational exercise where the candidate demonstrates knowledge and skill by going through an actual flight.
- (10) Questions should get the candidate thinking. Asking a question that requires a YES/NO answer doesn’t really tell the examiner much about the candidate’s level of understanding.
- (11) It is more effective to guide the candidate’s thoughts toward the area to be questioned and then ask the question. In this way the candidate can visualize the situation and then think about the answer to the specific question. Knowing that something happens is not as important as understanding WHY it happens.
- (12) Tricky or irrelevant questions should be avoided. Questions should be challenging for the candidate but all the necessary background to come to the answer must be provided.

4.7 Handling Candidate Answers

- (1) The examiner’s role is different from the instructor’s. Examiners are strictly there to observe and evaluate. Instructors are involved in the training experience with the student. They explain, demonstrate, allow students to practice, supervise practice and, finally, evaluate to confirm learning.
- (2) Examiners should avoid confirming an answer. Moreover, responding, “No, that’s not right” to an answer, may undermine a candidate’s self-confidence and affect performance for the remainder of the flight test.
- (3) Examiners should avoid leading candidates to the correct answer. However, an examiner may ask for clarification. For example: The answer “The nose would pitch down!” to the question “What would happen if the aircraft was loaded with a center of gravity close to the aft limit?” could be followed with a demand to explain what is meant by demonstrating the answer with a model aircraft.
- (4) Examiners should ask for a complete answer. For example: A candidate should be asked if more documents are required when their answer to the question “What documents are required on board the aircraft for flight?” is “Certificate of Registration”.

4.8 Qualities of Oral Questions

GOOD

EASILY UNDERSTOOD

Describe the steps to be followed on a crosswind takeoff.

COMPOSED OF COMMON WORDS

If you had an engine failure, what would be your first priority?

PROMOTES THINKING

Why is it so important to maintain the ideal glide speed for the aircraft?

PRACTICAL – OPERATIONAL

NOT SO GOOD

BEWILDERING

If you wanted to take off in a crosswind, what would the aeroplane do?

OVERSIZE

List all the steps you would take if you had an engine failure.

TOSS – UP

Is the glide speed for your aircraft important during a forced approach?

IRRELEVANT

What documents are needed on board the aircraft for the flight?

APPLICABLE / APPROPRIATE

What would happen if the aircraft were loaded with an aft C of G?

ONLY ONE CORRECT ANSWER

What is the normal climb speed for this aircraft?

What fee is charged for an aircraft's Certificate of Registration?

LEADING

If an aircraft were loaded with an aft C of G would it tend to pitch nose up?

TRICK

What types of climb speeds are there for this aircraft?

4.9 General Principles of Flight Testing

- (1) Examiners are evaluators and observers on flight tests. The candidate must do the flying. Examiners should make a concerted effort to be relaxed and non-threatening. The candidate is probably nervous enough without examiners shaking their heads, stiffening to rigidity or gasping at inappropriate times. If examiners remain calm and neutral the candidate will perform better.
- (2) Apply the standards in the applicable flight test guide regardless of the training and experience of the candidate.
- (3) Assigned tasks should be evaluated in relation to the standard for each item as stated in the Aim and prescribed **Performance Criteria**. Avoid the tendency to start with the ideal and reduce the assessment by one position for each error.
- (4) Assess the candidate against what would be an "ideal performance under existing conditions". For example, if it's windy and turbulent, the candidate will not be able to maintain altitude, heading and airspeed as well as if the day was calm.
- (5) Give credit where credit is due, and do not be influenced by poor performance on a previous item when assessing any other item.
- (6) Make use of the available scale of assessments, (a poor performance or an ideal one should be credited with the appropriate assessment). Consider each mark awarded. First, decide whether the aim of the item has been achieved, then determine which assessment best describes the quality of the candidate's performance based on the 4-Point marking scale. When applying the 4-point scale, award the mark that best describes the weakest element(s) applicable to the candidate's performance of the particular test sequence/item demonstrated.
- (7) Mark each item as soon as possible after it has been completed. If marks of 2 or less are awarded, written remarks must be made. The remarks are to be sufficient to inform others, to support subsequent discussion and justify the mark assigned.

4.10 4 Point Marking Scale

4	Performance is well executed considering existing conditions: • Aircraft handling is smooth and positive with a high level of precision. • Technical skills indicate a thorough knowledge of procedures, aircraft systems, limitations and performance characteristics. • Situational awareness is indicated by continuous anticipation and vigilance. • Flight management skills are exemplary and threats are consistently anticipated, recognized and well managed. • Safety margins are maintained through consistent and effective management of aircraft systems and mandated operational protocols.
3	Performance is observed to include minor errors: • Aircraft handling with appropriate control input but includes minor deviations. • Technical skills indicate an adequate knowledge of procedures, aircraft systems, limitations and performance characteristics to successfully complete the task. • Situational awareness is adequately maintained as candidate responds in a timely manner to cues and changes in the flight environment to maintain safety while achieving the aim of the sequence/item. • Flight management skills are effective. Threats are anticipated and errors are recognized and recovered. • Safety margins are maintained through effective use of aircraft systems and mandated operational protocols.
2	Performance is observed to include major errors: • Aircraft handling is performed with major deviations and/or an occasional lack of stability, over/under control or abrupt control input. • Technical skills reveal deficiencies either in depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that do not prevent the successful completion of the task. • Situational awareness appears compromised as cues are missed or attended to late or the candidate takes more time than ideal to incorporate cues or changes into the operational plan. • Flight management skills are not consistent. Instrument displays, aircraft warnings or automation serve to avert an undesired aircraft state by prompting or remedying threats and errors that are noticed late. • Safety margins are not compromised, but poorly managed.
1	Performance is observed to include critical errors or the <i>Aim</i> of the test sequence/item is not achieved: • Aircraft handling is performed with critical deviations and/or a lack of stability, rough use of controls or control of the aircraft is lost or in doubt. • Technical skills reveal unacceptable levels of depth of knowledge or comprehension of procedures, aircraft systems, limitations and performance characteristics that prevent a successful completion of the task. • Lapses in situational awareness occur due to a lack of appropriate scanning to maintain an accurate mental model of the situation or there is an inability to integrate the information available to develop and maintain an accurate mental model. • Flight management skills are ineffective, indecisive or noncompliant with mandated published procedures: and corrective countermeasures are not effective or applied. • Safety margins are compromised or clearly reduced.

4.11 Errors

- (1) An error means an action or inaction by the flight crew that leads to a variance from operational or flight crew intentions or expectations.
- (2) A **minor error** is an action or inaction that is inconsequential to the completion of a task, procedure or manoeuvre, even if certain elements of the performance vary from the recommended best practices.
- (3) A **major error** is an action or inaction that can lead to an undesired aircraft state or a reduced safety margin, if improperly managed; or an error that does not lead to a safety risk, but detracts measurably from the successful achievement of the defined aim of a sequence/item.
- (4) A **critical error** is an action or inaction that is mismanaged and consequently leads to an undesired aircraft state or compromises safety such as:
 - (a) Non-compliance with CARS or non-adherence to mandated Standard Operating Procedures (SOP); or
 - (b) Repeated improper error management or uncorrected and unrecognized threats, which risk putting the aircraft in an undesired state; or
 - (c) Repeated major errors or the non-performance of certain criteria prescribed in the Performance Criteria* that are essential to achieving the Aim* of a test sequence/item.

Note: * defined in the applicable Flight Test Guide.

4.12 Deviations

- (1) A deviation means a variance in precision with respect to a specified limit published for a manoeuvre within a test item or sequence, which is a result of pilot error or faulty handling of the aircraft.
- (2) A **minor deviation** is a deviation that does not exceed a specified limit.
- (3) A **major deviation** is a deviation that exceeds a specified limit or repeated minor deviations without achieving stability.
- (4) A **critical deviation** is a major deviation that is repeated, excessive or not corrected, such as:
 - (a) Repeated non-adherence to specified limits; or
 - (b) Not identifying and correcting major deviations; or
 - (c) More than doubling the specified value of a limit.

4.13 Using the Elements of the 4-Point Scale

ELEMENT	SUB -ELEMENT	GOOD PRACTICE	POOR PRACTICE
AIRCRAFT HANDLING	Quality and Accuracy	- Smooth use of controls; control input appropriate - Using approved techniques - Prompt but smooth action taken when deviations occur - Within tolerances	- Unable to fly aircraft smoothly and accurately - Not always using the best techniques - Overcorrecting and/or reacting late to deviations - Outside tolerances; rough use of controls - Unable to easily control aircraft during abnormal or emergency situations

TECHNICAL SKILLS AND KNOWLEDGE	Practical Understanding	- Practical use and understanding of aircraft systems, automation, data, charts, weather and physiological factors - Competency that gets the job done safely and efficiently	- Lacking in-depth understanding of aircraft systems, automation, data, charts, weather and physiological factors - Lack of knowledge detracts from outcome - Poor competency has potential to affect safety
	Following POH/AFM or SOPs	- Knowledge of all applicable POH/AFM recommendations or SOPs, as applicable- Follows all rules and regulations	- Not aware of some POH/AFM recommendations. Does not follow SOPs, where applicable and rules and regulations
FLIGHT MANAGEMENT SKILLS	Problem Definition /Diagnosis	- Gathers information to identify problem	- Nature of problem not stated or failure to diagnose
	Option Generation	- States alternative options	- Does not search for information
	Risk Assessment	- Considers estimated risk of alternative options	- No consideration of limiting factors
	Option Selection	-Determines a selected option / action	- decision path not taken
	Outcome Review	- Checks outcome against plan	- Fails to check selected outcome against goal
	Maintaining Standards	- Demonstrates will to achieve top performance	- Does not comply with POH/AFM or SOPs; - Does not care for performance effectiveness
	Workload Management	- Secondary operational tasks are prioritized to retain sufficient resources for primary flight duties - Allots adequate time to complete tasks- - Notices signs of stress and fatigue	- Secondary operational tasks interfere with primary flight duties - Workload is increased through inadequate planning - Ignores signs of stress and fatigue
SITUATIONAL AWARENESS	System Awareness	- Monitors and reports changes in systems' states - Acknowledges entries and changes to systems	- Does not ask for updates - Does not signal awareness of changing systems

	Environmental Awareness	- Collects information about environment (position, weather and traffic) - Contacts outside resources when needed (to maintain situational awareness)	- Does not inquire about environmental changes
	Awareness of Time and Anticipation of Future Events	- Identifies possible future problems	- Does not set priorities with respect to time limits
SAFETY OF FLIGHT	How well maintained?	- Respect for published procedures and limits - Effectiveness of lookout during visual manoeuvres	- Errors that are serious or have potentially grave consequences - Breach of regulations - Intervention required

5.0 CONDUCT OF THE FLIGHT TEST

- (1) Pilot Examiners must conduct flight tests in accordance with subpart 408 of the CARs – Conduct of Flight Tests, the relevant schedules in standard 428 of the CARs and the policies expressed in the Pilot Examiner Manual and the applicable Flight Test Guide(s) as well as approved policies in relevant Advisory Circulars. The guidance in this manual and the flight test guides should assure compliance with subpart 408 and the Schedules in Standard 428 of the CARs.
- (2) An examiner must conduct the oral portion of the flight test in a private area free from distractions. An examiner must give the candidate undivided attention during the test and ensure that any discussion of test results with the candidate is done in private unless; a candidate agrees to have the recommending flight instructor and/or the CFI or his/her delegate present.
- (3) Examiners are expected to vary the flight test profile, cross-country routing and emergency scenarios from candidate to candidate to avoid a situation in which student pilots might be trained specifically for that “predictable” examiner’s flight test. The result would be licensing of pilots with major gaps in training that are not identified through the flight test “snapshot event”.
- (4) An informal language proficiency assessment for candidates having been educated in English or French will be carried out by the examiner during the questioning and evaluation of Ex. 2 Aeroplane Familiarization and Preparation for Flight for the RPP (A), PPL and CPL flight tests or of Item Ex.2 – Preparation and Airworthiness for PPL(H) and CPL(H) flight tests.. An “Expert” or “Operational” assessment must be demonstrated to continue the flight test. An assessment of “Below Operational” will terminate the flight test.
- (5) Reference should be made to Advisory Circular 401-009 - The Conduct of Aviation Language Proficiency Demonstrations, which states:
PERSONS AUTHORIZED TO CONDUCT INFORMAL LANGUAGE PROFICIENCY DEMONSTRATIONS
7.1 General Requirements
(1) Persons conducting informal language proficiency demonstrations must have an expert level of language proficiency in the language they will use to conduct informal demonstrations.
(2) The following persons are authorized to conduct informal language proficiency demonstrations:

- (a) Civil Aviation Safety Inspectors trained to conduct informal language proficiency demonstrations;
 - (b) Pilot Examiners (PEs) are authorized to conduct informal language proficiency demonstrations during the ground portion of the flight test of student pilots applying for their Canadian aviation document; and
 - (c) Persons designated by the Chief, Commercial Flight Standards.
- (6) **Examiners must evaluate all ground items prior to terminating the flight test and declaring that an item has been unacceptably performed.** This measure will provide a more constructive and thorough debriefing and improve a candidate's chances of success with the ground portion for the subsequent attempt.
- (7) Except under extenuating circumstances, the practice of planning to complete the ground portion of flight tests for candidates on one day and the air portion on subsequent days is not recommended. This practice may compromise flight-test reliability.
- (8) Human factors can also have a significant effect on flight test reliability. Examiners should be conscious of these factors and attempt to limit their effects as much as possible for they may result in a lack of smoothness or accuracy in the candidate's performance. Examiners should be aware that their ability to accurately assess the candidate's performance can also be adversely affected by these same factors, especially fatigue.
- (9) For testing reliability, pilot examiners are expected, except under extenuating circumstances, to not conduct more than the following number of complete flight tests on a given day:
- (a) three (3) complete private pilot licence (aeroplane) or multi-engine class rating flight tests;
 - (b) two (2) complete private pilot licence or commercial pilot licence flight tests (helicopter)
 - (c) four (4) complete recreational pilot permit, instrument rating; or commercial pilot licence (aeroplane) flight tests for which VFR Navigation Progress Tests have been previously completed within an approved integrated course; or
 - (d) two (2) commercial pilot licence (aeroplane) or flight instructor rating flight tests
- Note:** These numbers are based on average flight test total times from historical data and represent a reasonable day of work for a pilot examiner.
- (10) Pilot examiners are acting as Agents of the Minister of Transport while conducting flight tests and must not succumb to business pressures and scheduling that may demand an unreasonable effort on their part. The Minister has a responsibility to oversee the performance of his or her delegates and may address concerns through discussion, oral counseling and, if required, suspension of authorities due to continued unreasonable work habits.

5.1 Examiner Responsibility during a Test

- (1) During the conduct of flight tests in aircraft, the examiner will remain alert for other traffic at all times and has a duty of care to intervene to maintain the safety of the flight.
- (2) The examiner may not assist the candidate in the management of the aircraft, radio communications, navigational equipment, and navigational charts, except in the following cases:
 - (a) In the case of a flight test for a Multi-engine Class Rating, the examiner may perform the radio communications required for coordination with ATC, as communication skills are not assessed during that flight test.
 - (b) In the case of an initial or IPC for the Instrument Rating, where the flight test is being conducted as simulated IFR in VMC under VFR rules and the examiner is role-playing as ATC, the examiner may perform the radio communications required for coordination with ATC. The examiner will use correct ATC terminology when delivering simulated ATC clearances to the candidate.

- (c) In the case of an IPC for the Instrument Rating, where a competent safety pilot is required by the **aeroplane owner** to occupy the right-hand pilot seat, the safety pilot may perform radio communications and read the checklist challenges only, and should not act as a co-pilot performing more extensive duties. Regardless, the candidate will “act” as a pilot-in-command and will be held responsible for the quality of the safety pilot’s performance conducting those delegated duties. The candidate will receive and read-back the initial clearance directly, if on a filed IFR flight plan. In such instances, the examiner will conduct the flight test from a third seat allowing an adequate view of the candidate’s instrumentation and have suitable radio and two-way intercom voice communication. The examiner may role-play as ATC and issue simulated ATC clearances if the flight is flown under VFR.
- (d) In the case of a test conducted in an aircraft requiring a crew of two, the examiner will evaluate the candidate’s performance from a third seat that permits a view of the candidate’s instrumentation and have suitable radio and two-way intercom voice communication. A competent and qualified pilot will be the pilot-in-command if the candidate does not hold the specific type rating or a valid instrument rating.

Note: An Instrument Rating flight test is not meant to replace a Pilot Proficiency Check (PPC) required under Part VI of the Canadian Aviation Regulations.

5.2 Flight Testing on a Flight Simulation Training Device (FSTD)

(1) General

- (a) Full-flight simulators and flight training devices must be certified in accordance with section 606.03 of the CARs – Synthetic Flight Training Equipment;
- (b) The certificate number will be noted on the flight test report in lieu of an aircraft registration;
- (c) The equipment has suitable two-way intercom voice communication that permits clear communication with the examiner. The intercom system should be used during the flight test;
- (d) No other person will occupy the co-pilot seat, except for multi-crew operations;
- (e) 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 test in accordance with the profile or sequencing of events specified by the examiner. Another qualified person will operate the equipment where the examiner does not possess the required qualifications or does not wish to operate the device during the test;
- (f) The device operator, if other than the examiner, must have been briefed prior to the flight test on the flight mission, flight profile, sequencing of events and the clearances to be delivered;
- (g) System failures must be practical. Multiple failures must be related and cascading as a result of the initial failure (i.e.: engine-driven hydraulic pump fails as a result of the associated engine’s failure), or as a result of pilot actions. Multiple unrelated failures must not be used.

(2) PPL(A) or CPL(A)

- (a) For a PPL or CPL partial flight test, and at the discretion of the examiner, a Level A full-flight simulator or a Level 3, 5 or 6 flight training device that reproduces the aircraft type used for the failed flight test may be used to re-test Item 29, Emergency Procedures.
- (b) For a CPL partial flight test, and at the discretion of the examiner, a certified FSTD, of the same category and class used for the previously failed flight test, may be used to re-test Item 24D, Radio Navigation – Aeroplane or Item 20E – Radio Navigation – Helicopter.

(3) Instrument Proficiency Check

- (a) The FSTD must at least meet all the equipment requirements stipulated Revision 3 of TP9685 - Aeroplane and Rotorcraft Simulator Manual - Chapter 6 – Non-Specific Type Devices – Level 2 or higher IPC/MCC;
- (b) In the case of a flight training device (FTD), the device shall have the operation specification “Instrument Proficiency Check authorized” included on its certificate and the certificate is valid;
- (c) The aeroplane class replicated on the FSTD shall be appropriate to the IFR Group qualification sought;
- (d) During an instrument proficiency check for single-pilot operation, no assistance is to be provided;
- (e) For multi-crew operation, the examiner will evaluate the candidate's IFR performance from a third seat that permits a view of the candidate's instrumentation. The candidate shall provide a qualified and competent person to act as co-pilot.
- (f) Where the examiner or the device operator role-plays as ATC, simulated clearances must use correct terminology;
- (g) “Repositioning” the aircraft along the route of flight to expedite the flight test is not permitted;
- (h) Simulate flight using approaches at any Canadian airport having adequate approach facilities that enable at least two different types of approaches;
- (i) Simulated weather conditions for the required approaches should be set at or close to the minimum weather criteria specified on the applicable approach charts;
- (j) Approach publications and databases for FSTDs should be current and obtained from reputable sources, such as NavCanada (CAP) or Jeppesen, but if the database is expired, the corresponding approach charts must be retained and used until the deferred defect is rectified. Expired databases must be updated prior to the annual re-certification of the FSTD;
- (k) System failures must be practical and applicable to IFR flight, not just type specific.
- (l) A plotting device, where installed, is a great tool for debriefing candidates. A printout of the plot associated with a failure should be retained by the examiner and attached to his/her copy of the flight test report.

5.3 Aircraft Equipment Requirements

The following guidelines are reflective of the requirements of section 2 of the Schedules of Standard 428 of the CARs.

(1) General – Aircraft used for flight tests will:

- (a) have a valid and current flight authority pursuant to subpart 507 of the CARs;
- (b) meet the requirements of section 605.06 of the CARs – Aircraft Equipment Standards and Serviceability. (All required equipment must be serviceable and the maintenance requirements current);
- (c) 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 or approved POH/AFM supplements; and
- (d) in all cases, the pilot examiner will ensure that the candidate provides current charts for the area and a current Canada Flight Supplement.

(2) Ultra-light Aeroplane Flight Test

- (a) Aircraft used for the conduct of the flight test may be one of the following:

- (i) an ultra-light aeroplane (two or three axis control, weight shift control or powered parachute aircraft);
 - (ii) an aeroplane that has a valid Special Certificate of Airworthiness – Amateur-Built and meets the definition of a basic ultra-light aeroplane;
 - (iii) an aeroplane that has a valid Special Certificate of Airworthiness – Owner Maintenance and meets the definition of a basic ultra-light aeroplane; or
 - (iv) an aeroplane that has a valid Certificate of Airworthiness and meets the definition of a basic ultra-light aeroplane.
 - (b) When an ultra-light aeroplane is used for the flight test, the aircraft will:
 - (i) be adequately equipped to permit the candidate to conduct the manoeuvres required for the flight test and to permit the examiner to assess the candidate's performance; and
 - (ii) meet the requirements of section 425.23 Training Aircraft Requirements - subsections (1) and (2) of the *Personnel Licensing Standards*.
 - (c) When an amateur-built, owner maintained or certified aeroplane is used for the flight test, the aircraft will meet the requirements of (b) (i) and (ii) above, and the following requirements:
 - (i) have a valid Certificate of Airworthiness or Special Certificate of Airworthiness;
 - (ii) respect section 605.06 of the CARs – Aircraft Equipment Standards and Serviceability (All required equipment must be serviceable and the maintenance requirements current); and
 - (iii) be flown in accordance with section 602.07 of the CARs– Aircraft Operating Limitations (Operated within the airframe and engine limitations set out in the aircraft flight manual).
- (3) Recreational Pilot Permit and Private Pilot Licence Flight Test – Aeroplane
- (a) The examiner will ensure that the candidate provides:
 - (i) an aeroplane for the flight test that:
 - (A) has a flight authority pursuant to subpart 507 of the CARs that has no operating limitations that prohibit the performance of the required manoeuvres; and
 - (B) meets the requirements of section 425.23 Training Aircraft Requirements – subsections (1), (2) and (3) of the *Personnel Licensing Standards*.
 - (ii) for the Private Pilot licence light test, an effective means of excluding outside visual reference to simulated instrument flight conditions, while maintaining a safe level of visibility for the pilot examiner.
- (4) Commercial Pilot Licence Flight Test – Aeroplane and Flight Instructor Rating – Aeroplane
- (a) The examiner will ensure that the candidate provides:
 - (i) an aeroplane for the flight test that:
 - (A) has a flight authority pursuant to subpart 507 of the CARs that has no operating limitations that prohibit the performance of the required manoeuvres, including intentional spinning;
 - (B) meets the requirements of section 425.23 Training Aircraft Requirements – subsections (1), (2), (3) and (4) of the *Personnel Licensing Standards*;
 - (C) has serviceable radio-navigation equipment, which should include a certified and approved GNSS receiver installation.
 - (ii) an effective means of excluding outside visual reference to simulate instrument flight conditions, while maintaining a safe level of visibility for the examiner.

Note 1: Subject to evidence of having had training on each type, more than one aeroplane may be provided to satisfy the requirements of the flight test.

Note 2: In the case of Flight Instructor Rating renewals, the requirement to provide an aeroplane certified for intentional spinning may be waived by the examiner where there is no intent to test instruction for spinning or advanced stalls.

- (5) Private and Commercial Flight Test – Helicopter and Flight Instructor Rating – Helicopter
 - (a) The examiner will ensure that the candidate provides:
 - (i) helicopter for the flight test that:
 - (A) has a flight authority pursuant to subpart 507 of the CARs that has no operating limitations that prohibit the performance of the required manoeuvres, including full-on autorotations;
 - (B) meets the requirements of section 425.23 Training Aircraft Requirements - subsections (1), (2) and (3) of the *Personnel Licensing Standards*; and
 - (C) is equipped with suitable radio and two-way intercom voice communication.
 - (ii) an effective means of excluding outside visual reference to simulate instrument flight conditions, while maintaining a safe level of visibility for the examiner.
- (6) Multi-engine Class Rating – Aeroplane
 - (a) The examiner will ensure that the candidate provides an aeroplane that:
 - (i) has a flight authority pursuant to subpart 07 of the CARs that has no operating limitations that prohibit the performance of the required manoeuvres; and
 - (ii) meets the requirements of section 425.23 Training Aircraft Requirements - subsections (1) and (2) of the *Personnel Licensing Standards*.
- (7) Instrument Rating Flight Test and Instrument Proficiency Check (IPC)
 - (a) The examiner will ensure that the candidate provides equipment appropriate for the flight test for the Instrument Rating or IPC in accordance with the following criteria:
 - (i) Aircraft to be used for an Instrument Rating flight test will have a flight authority pursuant to CAR 507 and will meet the following requirements:
 - (A) aeroplanes will be approved for IFR flight operations in the AFM/POH or AFM/POH Supplement (section 602.07 of the CARs – Aircraft Operating Limitations):
 - (B) helicopters will:
 - (I) be equipped with suitable radio and two-way intercom voice communication.
 - (II) when flown on an IFR Flight Plan, be approved for IFR flight operations in the AFM/POH or Supplement (section 602.07 of the CARs – Aircraft Operating Limitations).
 - (ii) Aircraft will be equipped in accordance with section 425.23 - Training Aircraft Requirements, subsections (1), (2) and (7) of the *Personnel Licensing Standards* with the exception that aeroplanes equipped with an electronic primary flight display are exempt from the requirement of paragraph 425.23(1)(b) of the CARs requiring a separate turn and slip or turn coordinator indicator;
 - (iii) Aeroplanes will be equipped with at least one certified and approved GNSS receiver and sufficient radio navigational equipment to meet the redundancy requirements of section 605.18 of the CARs – Power-driven Aircraft – IFR, permitting the pilot, in the event of the

failure at any stage of the flight of any item of that equipment, including any associated flight instrument display, to:

- (A) proceed to the destination aerodrome or proceed to another aerodrome that is suitable for landing; and
- (B) when the aircraft is operated in IMC, complete an instrument approach and, if necessary, conduct a missed approach procedure;
- (iv) When a VFR-only helicopter is flown in simulated IFR in VMC, the helicopter must be approved for Day or Night VFR, be equipped with a gyroscopic direction indicator or a stabilized magnetic direction indicator, an attitude indicator, a vertical speed indicator, a turn coordinator and an outside temperature gauge, as well as be equipped with two (2) different radio navigation systems of which one of the systems can be used for a precision approach, if it is an initial flight test or if the flight test is conducted to transition to an initial Group 4 rating.
- (v) Aircraft transponders, including any associated altitude sensing reporting mechanisms, must have been tested and recertified within the previous 24 months in accordance with subpart 625 Appendix C and subpart 571 Appendices B and F of the CARs .
- (vi) Aeroplanes will be equipped with GNSS equipment used for navigation that is a certified and approved for an RNAV (GNSS) approach or any other function, such as use in lieu of a DME or an NDB. For the LPV approach, GPS (WAAS) receivers must be certified and approved installations.

Note: Owners of privately-registered aircraft that are not equipped with GNSS receivers are exempt from the requirement to demonstrate an RNAV(GNSS) approach for the purposes of their personal Instrument Proficiency Checks.

- (b) Databases for GNSS or FMS units in aircraft must be current. FSTD Databases may be expired on condition that the expiration is noted as a deferred defect and the associated approach charts are utilized. All deferred defects must be corrected prior to the annual recertification of the device.
- (c) Where an observer's seat is occupied by an examiner, it will:
 - (i) be equipped with a safety harness installed in accordance with the Airworthiness Standards;
 - (ii) be located to permit an unobstructed view of the aircraft instruments, radios and navigation equipment; and
 - (iii) be equipped to monitor intercom and air to ground and air to air radio communications.
- (d) Flight Simulation Training Devices (FSTD) - Flight tests for Instrument Ratings may be conducted in full-flight simulators and Group 1, 2 and 3 IPC checks may be conducted in flight training devices (FTD) approved in accordance with the Aeroplane and Rotorcraft Simulator Manual (TP9685). The FTD used must at least meet the requirements listed in Chapter 6 – Non-Type Specific Devices for Level 2 - IPC/MCC or higher and have the additional authorization stipulated on the device's certificate. (MCC – Multi Crew Coordination)

Note: Flight tests for transition from a Group 3 Instrument Rating to a Group 1, 2 or 4 must be conducted in an aircraft or an approved Level C or higher full-flight simulator, not in an FTD.

- (e) Charts - Candidates for an Instrument Rating flight test will have current enroute, terminal and approach charts available, except that if a FSTD database is expired, the corresponding approach charts must be retained and used until the deferred defect is rectified. All deferred defects must be cleared prior to the annual recertification of the FSTD.
- (f) Tablet computers or electronic flight bags (EFB) with aviation applications may be utilized in lieu of paper charts. EFBs provide additional situational awareness, but do not replace the primary navigational equipment installed in the aircraft or flight simulation training device. The EFB in the

aircraft must be an approved installation or be mounted and secured so as to avoid dislodging during the flight test and impacting flight controls. Backup charts should be available in case of tablet failure.

- (g) The candidate must provide an effective means of excluding outside visual reference to simulate instrument flight conditions, while maintaining a safe level of visibility for the examiner.

Note: Operations in accordance with instrument flight rules (IFR) are allowed only in helicopters meeting the requirements of section 602.07 of the CARs- Aircraft Operating Limitations of the CARs. These IFR helicopters are generally complex multi-engine aircraft with multi-crew that are not operationally practical or economically feasible for the training and qualification testing of instrument flight. The operators of these types of helicopters have strict operational control systems. Therefore, the simulation of IFR flight in VMC aboard less complex helicopters limited to VFR operations is considered to be normal and acceptable for practical training and assessment for the group 4 instrument rating.

5.4 Meeting the Candidate

- (1) Examiners have a lot more experience conducting flight tests than their candidates have being tested. It's important to remember this and to always respect the candidate's situation. A certain level of nervousness will always be present in flight test candidates. Examiners must conduct themselves in a manner that does not add to the normal stress of the test situation.

5.5 Letter of Recommendation

- (1) To add validity to the certification statement made, the flight instructor recommending the candidate for the flight test should be the primary instructor who has conducted at least 50% of the last 10 hours of dual flight instruction.
- (2) Section 421.14 of the CARs does not specifically require that a pre-test evaluation have been conducted, when a recommending instructor certifies that a pre-test evaluation of all the flight test items has been conducted, but the supporting documentation, such as the PTR, should clearly indicate the items covered and be entered as "Pre-test Evaluation(s)". The pre-test evaluation may have been conducted by the recommending primary instructor, another experienced instructor or by his or her supervising instructor.
- (3) Written recommendations for flight tests are valid for 30 days. Should a letter of recommendation have expired prior to the flight test date, the recommending instructor may issue a new letter of recommendation if he/she is confident that the candidate is still competent to successfully complete the test. In these cases, the recommending instructor might require a new pre-test evaluation (complete or partial) to ascertain competency as the flight instructor's record may be affected in the event of a trend indicating the possibility of weak instruction. [Refer: section 401.67 of the CARs]
- (4) A partial re-test must be conducted within the 30 days after the date of the failed flight test. [subsection 408.18(2) of the CARs] The flight instructor who conducted the additional training for the re-test items will sign the letter of recommendation for re-test;
- (5) An incomplete flight test must be completed within the 30 days of the original letter of recommendation;
- (6) The supervising instructor of a Class 4 instructor recommending a candidate for a Recreational, Private or Commercial Pilot flight test must countersign the letter of recommendation.

5.6 Establishing the Candidate's Eligibility

- (1) The following guidelines are reflective of the requirements of Section 1 of each Schedule of subpart 428 of the CARs.
 - (a) Passenger Carrying Rating – Ultra-light Aeroplane
 - (i) In order to be admitted to an ultra-light aeroplane flight test, the candidate will present:

- (A) a valid original government-issued photo identification with signature;
- (B) a permit or licence or a valid Student Pilot Permit – Ultra-light Aeroplane;
- (C) proof of meeting the medical standards for the passenger-carrying rating;
- (D) a partially completed form Ultra-light Aeroplane Flight Test Report / Application for a Passenger Carrying Rating (form no 26-0667) which indicates that:
 - (I) a candidate for a Passenger Carrying Rating – Ultra-light Aeroplane has met all of the experience requirements required for the passenger carrying rating (421.55); or
 - (II) a candidate for a Flight Instructor Rating – Ultra-light Aeroplane has met the requirements of section 421.88 of the CARs- Flight Instructor Rating - Ultra-light Aeroplane – Requirements.
- (E) a letter from the holder of a valid Flight Instructor Rating - Ultra-light Aeroplane or a valid Flight Instructor Rating - Aeroplane, certifying that:
 - (I) the instructor has personally completed a pre-test evaluation with the candidate;
 - (II) the candidate is considered to have reached a sufficient level of competency to complete the flight test; and
 - (III) the instructor recommends the candidate for the flight test.
- (F) Evidence of meeting the requirements of section 421.14 – Flight Test Prerequisites.

(b) RPP(A), PPL AND CPL – Aeroplane or Helicopter

- (i) In order to be admitted to a flight test required for the issuance of a Pilot Permit-Recreational – Aeroplane, Private Pilot Licence or Commercial Pilot Licence, the candidate will present evidence of meeting the requirements of section 421.14 of the CARs – Flight Test Prerequisites of the Personnel Licensing Standards including:
 - (A) a valid original government-issued photo identification with signature;
 - (B) a permit or aviation document with current medical certification meeting the medical standards for the permit or licence sought;
 - (C) in the case of an applicant for a Commercial Pilot Licence - Aeroplane or Helicopter, who is not enrolled in an approved integrated course, proof of having successfully completed the required written examination, and a letter from a flight instructor certifying that the applicant has satisfactory knowledge of the subject area or areas in which a deficiency was indicated by the feedback letter issued by the Flight Training and Aeronautical Education (FTAE) computer system and meets the competency standard for issuance of the Commercial Pilot Licence. [Refer: paragraph 421.14(3)(b) of the CARs]
 - (D) a letter from a qualified flight instructor certifying that:
 - (I) in the case of aeroplanes, training for all of the exercises in the Flight Training Manual and the Flight Instructor Guide from Ex. 1 thru to Ex. 24 and Exercises 29 and 30, including Ex. 13 has been completed;
 - (II) in the case of helicopters, training for all exercises from Ex. 2 through to Ex. 31 has been completed, including full-on autorotations;
 - (III) a pre-test evaluation has been completed with the candidate;

- (IV) the candidate is considered to have reached a sufficient level of competency to complete the flight test for the issuance of the rating, permit or licence;
 - (V) the instructor recommends the candidate for the flight test;
 - (VI) if recommended by a Class 4 Flight Instructor, a supervising instructor must countersign the letter of recommendation.
- (E) proof of having acquired the following levels of experience:
- (I) in the case of a candidate for a Pilot Permit-Recreational - Aeroplane (RPP) flight test, no less than 25 hours flight time;
 - (II) in the case of a candidate for a Private Pilot Licence (PPL) flight test, no less than 35 hours flight time; (Refer to the applicable credits when other licence categories are held.)
 - (III) in the case of a candidate for a flight test other than RPP and PPL, no less than 75% of the total flying experience required for the licence.

Note: Canadian Forces applicants who are qualified to pilot wings standard shall not be required to submit a letter of recommendation. Holders of valid Private and Commercial Pilot Licences issued by a contracting state of the International Civil Aviation Organization are exempt from the requirement of a written recommendation, if the flight test is for the purpose of obtaining the equivalent Canadian licence.

(c) Multi-engine Class Rating - Aeroplane

- (i) In order to be admitted to the flight test required for the multi-engine class rating – aeroplane, the candidate will present:
 - (A) a valid original government-issued photo identification with signature;
 - (B) a valid aviation document - Aeroplane category with current medical certification of meeting the medical standards for the licence held;
 - (C) a recommendation letter dated within 30 days prior to the flight test from a person qualified in accordance with subsection 425.21(5) of the CARs of the Personnel Licensing Standards certifying that:
 - (I) the candidate has received training in accordance with the Instructor Guide – Multi-Engine Class Rating (TP11575);
 - (II) a pre-test evaluation has been conducted with the candidate;
 - (III) the candidate is considered to have reached a sufficient level of competency to complete the flight test for the issuance of a multi-engine class rating; and
 - (IV) the candidate is recommended for the flight test.

(d) Initial Instrument Rating

- (i) In order to be admitted to a flight test required for the initial issue of an Instrument Rating, the candidate will present:
 - (A) a valid original government-issued photo identification with signature;
 - (B) a valid aviation document with current medical certification of meeting the medical standards for the licence held ;
 - (C) proof of having successfully completed the written examination (INRAT) prescribed in the Personnel Licensing Standards within the previous 24 months [subsection 400.03(1) of the CARs];

- (D) proof that the training and experience requirements set out in sections 421.46 and 421.14 of the *Personnel Licensing Standards* have been met; and
 - (E) a written recommendation from a qualified person certifying that the candidate has the training and experience required and has reached a sufficient level of competency to complete the flight test.
- (e) Instrument Proficiency Check (IPC)
 - (i) In order to be admitted to an Instrument Proficiency Check, the candidate will present:
 - (A) a valid original government-issued photo identification with signature;
 - (B) a valid aviation document with current medical certification of meeting the medical standards for the licence held ;
 - (C) proof of having held a valid Canadian Instrument Rating.
- (f) Partial Re-Test
 - (i) In order to be admitted to a partial re-test following failure of a complete flight test, the candidate will provide:
 - (A) a permit or aviation document with current medical certification meeting the medical standards for the permit or licence sought or held, as applicable;
 - (B) a copy of the Flight Test Report for the previously failed flight test;
 - (C) a new letter of recommendation, signed by a qualified person, dated within 30 days after the failed flight test, certifying that the candidate:
 - (I) has received further training on the failed item(s);
 - (II) is considered to have reached a sufficient level of competency to successfully complete the flight test; and
 - (III) is recommended for the re-test.
 - (D) If recommended by a Class 4 instructor, the supervising instructor must countersign letters of recommendation.

5.7 Authorization of Flight Instructor Rating Flight Tests

- (1) It is recommended that Pilot Examiners, holding authority to conduct Flight Instructor Rating flight tests consult with their Transport Canada Regional Office or TCC, before conducting a Flight Instructor Rating flight test for a candidate due to the possibility that holders of Flight Instructor Ratings may become subject to section 421.67 of the CARs – Flight Test Record (requiring Transport Canada follow-up action). The Regional Office may authorize the flight test or elect to have an authorized CASI conduct the flight test.

5.8 Initial Flight Instructor Rating

- (1) Before attempting a flight test for an initial instructor rating, a candidate is required to have:
 - (a) a valid Canadian Commercial, or Airline Transport Pilot Licence aviation document for the same aircraft category as the rating sought and a current medical certification of meeting the medical standards for the licence held;
 - (b) proof of having completed:
 - (i) a minimum of 230 hours total time in aeroplanes (prerequisite plus 30 hours of flight instructor training), including 20 hours instrument time, of which a minimum of 10 hours shall be instrument flight time [section 421.69 of the CARs]; or

- (ii) a minimum of 250 hours pilot-in-command flight time in helicopters, and have completed a minimum of 15 hours instrument time of which a maximum of 10 hours may have been completed in an approved flight simulation training device; or
 - (iii) a commercial pilot licence - aeroplane/instrument rating (CPL(A)/IR) integrated course.
- (c) proof of having successfully completed the appropriate written examination within the previous 24 months (section 400.03 of the CARs); and
- (d) a Pilot Training Record (PTR) showing that the required flight instructor training has been completed for the following:
 - (i) all air exercises have been covered with at least 30 hours of dual flight instruction including 5 hours training in teaching instrument flight skills
 - (ii) a practical application of the basic principles of learning and techniques of instruction;
 - (iii) the preparation and use of lesson plans;
 - (iv) procedures for planning and presenting preparatory ground instruction, pre-flight briefings, in-flight instruction and post-flight debriefings;
 - (v) theory of flight required to teach the air exercises;
 - (vi) aircraft flight manuals and aircraft operating limits;
 - (vii) presentation of pilot decision-making concepts; and
 - (viii) use of the Transport Canada Flight Instructor Guide, Flight Training Manual, Canadian Aviation Regulations and the Flight Test Guides for the Private Pilot and Commercial Pilot Licences.
- (e) a letter of recommendation signed within the preceding 30 days by the holder of a valid Class 1 Flight Instructor Rating - Aeroplane, Helicopter, or Aerobatic, as appropriate, certifying that:
 - (i) the candidate has received the required flight and ground instruction;
 - (ii) the candidate is considered competent to complete the flight test for the Flight Instructor Rating; and
 - (iii) the candidate is recommended for the flight test.
- (2) A PTR is not required for Canadian Forces Flight Instructors or, in those instances specified in the Personnel Licensing Standards (subpart 421 of the CARs), for holders of a Flight Instructor Rating issued by a Contracting State. Candidates for aerobatic flight instructor ratings are not required to maintain Pilot Training Records but must record details of their instructor training in their pilot log book.

5.9 Renewal and Upgrade of Flight Instructor Rating

- (1) Flight tests for upgrade to a Class 1 Flight Instructor Rating are to be conducted by an authorized CASI, unless a PE is specifically authorized.
- (2) An examiner must ascertain very clearly whether a candidate wants to simply upgrade to a higher class or wants to simultaneously renew the existing flight instructor rating. A failure to renew invokes section 401.17 of the CARs which requires that the Minister suspend the rating. If the flight test was merely an attempt to upgrade, an unsuccessful attempt to upgrade allows the candidate to continue with the existing rating until it expires or is renewed. [Refer: SI-SUR-016]
- (3) **Each item of the Flight Instructor Rating flight test will be evaluated separately. The item with the lowest class of Flight Instructor Rating will determine the Class to be awarded or a failure.**
- (4) An applicant who is the subject of follow-up action in accordance with section 421.67 of the CARs – Flight Test Record is not eligible to upgrade to a higher class of Flight Instructor Rating. The status of a candidate may be determined by contacting the Transport Canada Regional Office or the closest TCC.

- (5) In order to be admitted to a flight test required for the renewal of a Flight Instructor Rating, the candidate will present:
 - (a) a valid pilot licence booklet with current medical certification of meeting the medical standards for the licence held; and
 - (b) proof of having held a valid flight instructor rating within the previous 24 months.
- (6) Valid flight instructor ratings, and ratings that have expired for not more than 12 months, may be renewed by means of a flight test. Renewals and upgrades conducted up to 90 days before expiry of the rating held will be issued for a term extending from the original expiry date. Most upgrades have examination prerequisites.
- (7) Candidates whose ratings have been expired for more than 12 months, but less than 24 months must submit a completed "Flight Crew Licence - Application for Endorsement" (Form 26-0083) signed within the preceding 30 days by the holder of a valid Class 1 instructor rating - aeroplane, helicopter, or aerobatic, as appropriate - recommending the candidate for an instructor flight test.
- (8) Candidates whose ratings have been expired in excess of 24 months must submit a completed "Flight Crew Licence - Application for Endorsement" (Form 26-0083) signed within the preceding 30 days by the holder of a valid Class 1 instructor rating - aeroplane, helicopter, or aerobatic, as appropriate - recommending the candidate for an instructor flight test. They must also have successfully completed the appropriate written examination(s) within the preceding 24 months.

5.10 Conduct of the Flight Instructor Flight Test

- (1) The flight test for the Flight Instructor Rating is conducted in accordance with the Flight Test Guide – Flight Instructor Rating – Aeroplane, Helicopter, Aerobatic (TP5537), in conjunction with the advice to examiners contained in this manual.
- (2) The flight test for the flight instructor rating consists of four phases titled – **Preparatory Instruction, Pre-flight Briefing, In-flight Instruction and Post-flight Debriefing**. The test is intended to simulate a realistic training session with a student and should not normally take more than four (4) hours to complete.
- (3) Details of the four phases of the flight test are given under the *headings Aim, Description, and Performance Criteria*. For any assessment other than FAIL, the stated aim must be met and, in the judgment of the examiner, the candidate's action would be expected to result in a satisfactory level of understanding by a student. The "Assessment Considerations" section provides guidelines for the examiner - not all items listed need be completed.
- (4) The privileges sought will determine the nature of the test. For example, the test for upgrading to a Class 2 rating, aeroplane or helicopter, will include assessment of supervisory knowledge. The test for upgrading to a Class 1 rating will include an assessment of the ability to train instructors. Renewal flight tests for these ratings will, at the discretion of the examiner, include assessments related to any of the privileges of the rating as specified in subpart 401 of the CARs.
- (5) The test for an aeroplane or helicopter flight instructor rating will sample exercises required for training toward a private or commercial pilot licence, night rating, multi-engine, instrument rating or Class 4 instructor rating, as appropriate. The test for an aerobatic instructor rating will sample the aerobatic manoeuvres listed in subsection 421.91(3) of the *Personnel Licensing Standards*. Although the candidate must be prepared to demonstrate the ability to effectively instruct any of the applicable exercises, the test is a sampling of performance designed to permit completion of the test within a reasonable period of time.
- (6) After determining the candidate's admissibility for the flight test, the examiner will present a training scenario applicable to a student pilot of average ability detailing background knowledge and flight experience. This can be done by describing the student or by providing an actual or sample PTR or logbook. The candidate will then prepare an appropriate training lesson.

- (7) During the ground portion, the candidate will present preparatory ground instruction and a pre-flight briefing appropriate to the planned lesson. The examiner will play the role of the student and will endeavour to keep the scenario as realistic as possible by responding to questions and inquiring for further detail where details may be sketchy in a manner that emulates a typical motivated student pilot.
- (8) For the flight portion, role-play may have to be suspended from time to time in order to accommodate various situations. The examiner will make clear when the role-play is being suspended and when it is being re-started.
- (9) The examiner will occupy the seat normally occupied by the student in the aircraft. The examiner will play the role of a typical pilot trainee seeking a licence or rating who has the background knowledge required to commence the planned training session. The examiner will have the candidate teach an exercise in flight for which preparatory ground instruction has been given in the preparatory ground instruction phase of the test and will choose other impromptu exercises to be taught. For these impromptu exercises, it will be assumed that all necessary preparatory instruction has been given.
- (10) If the examiner determines that a demonstration or explanation is sketchy, unclear or the outcome uncertain, the examiner may request clarification of the sketchy or unclear explanation or require the candidate to repeat all or portions of that task or manoeuvre. This provision has been made in the interest of fairness and does not mean that instruction, practice or the repeating of an unsatisfactory task is permitted during the evaluation. When practicable, the remaining tasks of the flight test should be completed before repeating the questionable performance.
- (11) The examiner or candidate may discontinue the test at any time when the failure of a task or manoeuvre makes the candidate ineligible for the rating sought. A test may be continued only with the consent of the candidate.
- (12) After the post-flight debriefing of the flight test is completed, the examiner will conduct a de-briefing of the candidate's performance. Where the candidate has been recommended for the test, the recommending Class 1 Flight Instructor should be present for the de-briefing.

5.11 Test Conditions

- (1) All flight tests will be conducted, at the sole discretion of the examiner, when the weather conditions do not present a hazard to the operation of the aircraft and will permit the required tasks to be tested, the aircraft is airworthy, and the candidate's documents, as required by the Canadian Aviation Regulations, are valid.

5.12 Briefing the Candidate

- (1) The briefing is commonly divided into two parts, one outlining the ground portion of the flight test, the other, a thorough pre-flight briefing following the ground portion. Time should be taken to clear up any questions the candidate may have regarding the test. It is a good time to confirm that the candidate is aware of the standards as outlined in the appropriate flight test guide.
- (2) Examiners are required to brief test candidates on the following details:
 - (a) **The sequence of flight test items.** There is no need for the candidate to memorize this sequence, as the examiner will assign each item in accordance with the item's Description.
 - (b) **If in doubt - Ask!** Candidates who do not clearly understand what they are being asked to do should feel free to ask. It may be that the examiner was not clear in giving instructions.
 - (c) Who is pilot-in-command? Pursuant to sections 401.03 and 401.19 of the CARs through to 401.27, unless the candidate holds a valid CPL licence or a valid rating (multi or IFR), the examiner will be the pilot-in-command. In all cases, the examiner reserves the right to exercise all reasonable duty of care to ensure safe flight by intervening or taking control of an aircraft when any action or lack of action by the candidate seriously jeopardizes flight safety or if a breach of regulation is imminent.

- (i) Pursuant to the *Aeronautics Act*: “pilot-in-command” means, in relation to an aircraft, the pilot having responsibility and authority for the operation and safety of the aircraft during flight time. The responsibility and authority of an examiner, while conducting any flight test, is illustrated by the following non-exhaustive list. An examiner:
 - (A) determines the route of the aircraft;
 - (B) establishes the conditions for the takeoff and landing;
 - (C) directs the candidate when conducting air exercises;
 - (D) manipulates the flight and power controls at his/her own discretion when preparing for certain exercises;
 - (E) intervenes, when necessary and at any time, to ensure the safe continuation of the flight;
 - (F) makes decisions with respect to the continuation or termination of the flight.
 - (ii) If the examiner performs the duties listed in the short list above, by default the Pilot Examiner effectively is the Pilot-in-Command. Whether the examiner signs off as PIC or not, he or she, as the most qualified on board, may be held responsible for any negligence or for not exercising all reasonable duty of care as any other reasonable person in the same position would have exercised.
 - (iii) **Duty of care** refers to the circumstances and relationships which the law recognizes as giving rise to a legal duty to take care. A failure to take such care can result in the defendant being liable to pay damages to a party who is injured or suffers loss as a result of their breach of **duty of care**.
- (d) The roles of the candidate and examiner in the event of an actual emergency? Although the examiner may be PIC, the candidate, role-playing as a PIC with a passenger, shall provide a briefing to the examiner detailing the actions to be taken by the candidate and examiner in the event of an actual emergency. The examiner may question or supplement the briefing, as required, to ensure the highest possible level of safety in the event of an actual emergency.
 - (e) How to transfer control. There should never be any doubt as to who is flying the aircraft, so proper transfer of control using phrases such as “You have control” and “I have control” is expected during a flight test. A visual check is recommended to verify that the exchange has occurred.
 - (f) Ground References. Intended touchdown zones and specific touchdown points. For the short or soft field approach and landing, the examiner will clearly specify the simulated surface conditions, obstacles on approach, runway threshold and length of surface available to the candidate.
 - (g) Method of simulating emergencies. What method will be used? Verbal? Engine failures will only be simulated in accordance with the manufacturer’s recommendations or, in their absence, by closing the throttle or by reducing power to flight idle. The moving of mixture controls to idle cut-off will only be used where specifically recommended by the manufacturer. In the case of multi-engine simulated engine failures, the examiner will only set the engine with the simulated power loss to zero thrust after the candidate has simulated feathering the correct propeller. The recommended zero-thrust setting should be determined prior to flight. The failure of electronic flight displays can be simulated according to the Instructor and Examiner Manual supplied by the manufacturer or the appropriate supplements of the POH.

Note: The practice of closing fuel valves, shutting off magneto switches or the pulling of circuit breakers will not be used during a flight test. Electronic flight display failures may be simulated in accordance with appropriate POH/AFM Supplements or the avionics manufacturer’s Guide for DPEs and CFIs.

Note: The Cessna Aircraft Company does not recommend pulling any circuit breakers for electronic displays.

- (3) In the case of a commercial pilot - aeroplane flight test, when two (2) aeroplanes are to be used to complete the required flight test items, such as spinning, the flight test items should be divided in a practicable way to avoid, as much as possible, re-assessing items performed for the purposes of both flights. When multiple flights occur to complete the flight test, it must be made clear to the candidate that items required to be repeated for the purposes of the second flight may be re-assessed as a “1” if their aim is not achieved or safety is compromised.

5.13 Flight Test

- (1) All of the flight test items required by the flight test report and described in the applicable flight test guide must be completed and the applicable minimum pass mark must be achieved. Ground flight test items are those exercises or tasks performed prior to the pre-flight inspection of the aircraft. Ground flight test items will be assessed before the flight portion of the flight test.
- (2) Air flight test items are those exercises, tasks or manoeuvres performed with the aircraft, including the pre-flight inspection, start-up, run-up, taxiing and emergency procedures.

5.14 Pass Marks

- (1) The pass mark for each flight test is:

Ultra-light Aeroplane	Powered parachute, weight shift or two axis aircraft	30 (50%)
Ultra-light Aeroplane	All eligible aircraft not listed above	32 (50%)
Pilot Permit – Recreational	Aeroplane	42 (50%)
Private Pilot Licence	Aeroplane	62 (50%)
	Helicopter	70 (50%)
Commercial Pilot Licence	Aeroplane	93 (70%)
	Integrated CPL(A)	81 (70%)
	Helicopter	104 (70%)
Multi-engine Class Rating	Aeroplane	73 (70%)
Instrument Rating	Aeroplane and Helicopter	39 (60%)
Flight Instructor Rating	Aeroplane, Helicopter and Aerobatic	Achieve the required standard for the rating held or sought.

5.15 Repeated Flight Test Items

- (1) A flight test item or manoeuvre is performed once and assessed once. An item or manoeuvre may be repeated only in the following circumstances:
- (a) **Discontinuance:** Discontinuance of a manoeuvre for valid safety reasons; i.e., a go-around or other procedure necessary to modify the originally planned manoeuvre.
 - (b) **Collision Avoidance:** Examiner intervention on the flight controls to avoid another aircraft, which the candidate could not have seen due to position or other factors.
 - (c) **Misunderstood Requests:** Legitimate instances when candidates did not understand an examiner’s request to perform a specific manoeuvre. A candidate’s failure to understand the nature of a specified manoeuvre being requested does not justify repeating a flight test item or manoeuvre.

- (d) **Other Factors:** Any condition under which the examiner was distracted to the point that he or she could not adequately observe the candidate's performance of the manoeuvre (radio calls, traffic, etc.).

Note: These provisions have been made in the interest of fairness and safety and do not mean that instruction, practice, or the repeating of a flight test item or manoeuvre unacceptably demonstrated, are permitted during the flight test evaluation process.

5.16 Incomplete Flight Test

- (1) If the test is not completed due to circumstances beyond the candidate's or examiner's control, the subsequent flight test will include the flight test items not completed during the original flight test event and will be completed within the 30 days of the original letter of recommendation.
- (2) For an Incomplete Flight Test, the Flight Test Report form is required to be mailed to Transport Canada within 5 working days unless the same Pilot Examiner who conducted the initial portion of the incomplete flight tests is available and requested to complete the remainder of the Flight Test. If the same Pilot Examiner is used to complete the flight test, he/she will hold the Flight Test Report form until it is completed for a maximum of 30 days from the original Letter of Recommendation. The Flight Test Report form will be annotated in the Remarks section to clearly identify the dates on which the portions of the flight test were completed, including the reason for the initial discontinuation.
- (3) If the original Pilot Examiner is not requested to, or not able to complete the Flight Test within 30 days from the original Letter of Recommendation, the original Flight Test Report form will be annotated "Incomplete Flight Test" with reason(s) for the discontinuation in the Remarks section and sent to Transport Canada within 5 working Days. A copy of the signed Flight Test Report form for the incomplete flight test and a copy of the original Letter of Recommendation will be presented to the candidate.
- (4) In the event another Pilot Examiner is requested to complete the remainder of a Flight Test Report form that is marked as "Incomplete", and is within 30 days of the date identified on the original letter of recommendation, that Pilot Examiner may complete the remainder of the flight test. They will require a copy of the signed Flight Test Report form from the original incomplete flight test and a copy of the original Letter of Recommendation to proceed. Once the flight test is completed, the Pilot Examiner will complete a new Flight Test Report form by transcribing all information from the original Flight Test Report and completing the remainder of the Flight Test Report. The Flight Test Report form will be annotated in the Remarks section to clearly identify the dates on which the portions of the Flight Test was completed, including the name of the original Pilot Examiner.
- (5) The following process will apply:
 - (a) a copy of the incomplete flight test report must be presented to the candidate;
 - (b) the flight test may be completed at a later date;
 - (c) the test may be completed by the same or another examiner;
 - (d) the original letter of recommendation remains valid;
 - (e) flight test items already assessed will not be re-tested, but items already demonstrated during the initial flight, and repeated for the purpose of the second flight, may be re-assessed as a "1" if their aim is not achieved or safety is compromised;
 - (f) a justification for the delay is required on the flight test report;
 - (g) the candidate is permitted to perfect his/her training while awaiting completion of the test.
- (6) If the initial flight test included one or two failed air items (only one for IFR), the partial flight test for these items may be conducted during the subsequent flight test flight, after the candidate has completed all of the required items, provided:
 - (a) the minimum pass mark has been achieved;

- (b) no additional items were failed during the subsequent flight test; and
- (c) a letter of recommendation for the partial flight test was received prior to the flight.

5.17 Failure of a Flight Test

- (1) A flight test item is failed (mark of "1") under the following circumstances: [Refer: section 408.18 of the CARs]
 - (a) The aim of the task or manoeuvre is not achieved;
 - (b) The performance of an item includes errors or deviations that are repeated or that are not recognized or corrected in a timely manner;
 - (c) The handling of the aircraft is rough or includes uncorrected or excessive deviations from specified tolerances;
 - (d) The candidate exceeds by more than double the deviation tolerances applicable to the item because of pilot error or poor technique;
 - (e) The candidate does not demonstrate the level of technical proficiency or knowledge necessary to carry out the functions of the licence, permit or rating;
 - (f) The candidate has lapses in situational awareness that are not identified or corrected;
 - (g) The candidate's flight management skills are ineffective;
 - (h) The safety of flight is compromised.
- (2) The examiner will normally stop the test when it is apparent that a complete retest is required, but if after having advised the candidate, the candidate prefers to be evaluated on the remaining items, the examiner may continue the test at his/her discretion if the candidate does not appear to be too adversely affected.
- (3) **Examiners are expected to evaluate all ground flight test items prior to announcing a failure and stopping the test.** This would provide good feedback during the debriefing to the candidate and recommending instructor. Except in the case of the ultra-light aeroplane flight test, the failure of any item during the assessment of ground flight test items requires a complete re-test and precludes the flight portion of the flight test. Ground flight test items are not eligible for a partial flight test. The failure of any portion of the flight test for the Flight Instructor Rating requires a complete re-test.(4).

5.18 Partial Flight Test

- (1) Provided that the applicable pass mark has been achieved and there are no more than two failed air items (one for Instrument Rating), the skill requirement for licence/rating issuance/renewal may be met by completing a partial re-test of the items assessed as "1".
- (2) The candidate will be required to successfully perform the air items failed on the complete flight test. Flight test items already assessed will not be re-tested, but flight test items already demonstrated during the initial flight, but repeated for the purpose of the second flight, may be re-assessed as a "1" if their aim is not achieved or safety is compromised. The partial flight test must be completed **within 30 days following the date of the failed flight test**, or 60 days in the case of the ultra-light aeroplane flight test. No more than one partial flight test will be allowed for each complete flight test.

5.19 Complete Re-test

- (1) A complete re-test will be required in the following situations:
 - (a) the required pass mark is not obtained during a complete flight test;
 - (b) failure of any ground flight test item;
 - (c) failure of more than two air flight test items (more than one air items for the Instrument Rating) during a complete flight test;

- (d) exceeding the maximum number of combined “1s” and “2s” stipulated on the table at section 5.19(2) of this manual;
 - (e) failure of any item in the case of a flight instructor rating flight test;
 - (f) failure to complete a partial retest within 30 days following the date of the failed flight test;
 - (g) failure of an air flight test item during a partial flight test;
 - (h) displaying unsafe or dangerous flying;
 - (i) demonstrating a pattern of failing to use proper visual scanning techniques to clear the area before and while performing visual manoeuvres; or
 - (j) an incomplete flight test is not completed within 30 days of the original letter of recommendation or 60 days in the case of the ultra-light aeroplane flight test.
- (2) Pursuant to Advisor Circular (AC) 408-002, **if during the flight test a candidate is evaluated a combined number of “1s” and/or “2s” that exceeds the maximum number in the table below, the examiner will terminate the flight test and a complete retest will be required after supplementary training to address the weak areas identified**

Passenger-carrying Rating Ultra-light Pilot Permit	Recreational Pilot Permit (A)	Private Pilot Licence (A)	Commercial Pilot Licence (A)	Private Pilot Licence (H)	Commercial Pilot Licence (H)	Multi-engine Class Rating	Instrument Rating and Instrument Proficiency Check
4	6	5	4	6	5	4	3

- (3) How the policy of limiting the number of “2s” is implemented:

Example 1 - Instrument rating flight test. Maximum number = 3

Two “2s” + one “1” = 3 – the candidate qualifies for a partial retest of that one failed item.

Three or more “2s” + one “1” – the flight test is terminated and a complete retest is required.

Four or more “2s” – the flight test is terminated and a complete retest is required.

Example 2 – Private Pilot Licence (A) flight test. Maximum Number = 5

Three “2s” + two “1s” = 5 - the candidate qualifies for a partial retest of the two failed items.

Four “2s” + one “1” = 5 - the candidate qualifies for a partial retest of the one failed item.

Five or more “2s” + one “1” – the flight test is terminated and a complete retest is required.

Six or more “2s” – the flight test is terminated and a complete retest is required.

Note1: In the case of a complete re-test, the examiner should not ask to see a copy of the previously failed flight test report.

Note 2: An intervention, during a manoeuvre where the examiner has to take control to maintain safety of flight does not necessarily constitute, “displaying unsafe or dangerous flying” as stated in (e) above. It may constitute a failure of the specific flight test item. Subparagraph (e) above, would apply when a candidate displays an outright disregard for rules of the air and/or causes a serious safety breach that is not linked to a lack of skill or knowledge for the performance of a specific manoeuvre or task.

5.20 Flight Test Profile

- (1) Examiners are expected to vary the flight test profile, cross-country routing and emergency scenarios from candidate to candidate to avoid a situation in which student pilots might be trained specifically for that “predictable” examiner’s flight test. The result would be licensing of pilots with major gaps in training that are not identified through the flight test “snapshot”.
- (2) Flight tests should follow a planned sequence that results in a minimum amount of unproductive flight time. By pre-planning, an examiner can combine various items such as high level, low level, and circuit work in order to keep transit time and repetitive climbing and descending to a minimum. However, care must be taken to ensure that the candidate will not be rushed while demonstrating the flight test items.
- (3) No matter what test profile is used, care must be taken with regard to the diversion portion of the navigation items. The candidate must be allowed time to identify the present location before commencing the diversion when, after the high level cross-country exercise, the examiner has requested other demonstrations which could have caused their position to become uncertain. It is not acceptable to request a diversion from an unknown position.
- (4) The following are examples of item sequencing for the flight test. This information is intended as a guide for examiners to draw up their own plan of action for the airborne portion of the flight test.
 - (a) **Passenger Carrying Rating – Ultra-light Aeroplane**
 - (i) taxi, take-off, circuit departure;
 - (ii) pilot navigation;
 - (iii) stall;
 - (iv) precautionary landing;
 - (i) return to airport of departure with a forced landing approach enroute;
 - (ii) circuit work and landing.
 - (b) **RPP(A), PPL(A), CPL(A)** (Average RPP(A) 1.3 hr., PPL 1.6 hr., CPL 1.8 hr.)
 - (i) taxiing, takeoff and departure;
 - (ii) pilot navigation;
 - (iii) high level test items;
 - (iv) instrument flying;
 - (v) forced landing approach;
 - (vi) diversion;
 - (vii) precautionary landing;
 - (viii) radio navigation;
 - (ix) a circuit, with either a normal takeoff and landing, or a maximum performance takeoff and landing at an alternate aerodrome or upon return to the departure airport;
 - (x) return to airport of departure for completion of circuit work; and
 - (xi) emergencies.
 - (c) **PPL(H), CPL(H)** – (Average 1.7 hr.)
 - (i) a liftoff and departure;
 - (ii) navigation;
 - (iii) alternate destination, low level navigation;

- (iv) instrument work;
 - (v) steep turn;
 - (vi) forced landing - auto-rotation;
 - (vii) confined area;
 - (viii) sloping ground;
 - (ix) emergencies, returning to airport of departure for autorotations and other circuit work;
 - (x) radio navigation;
 - (xi) a circuit, with either a normal takeoff and landing, or an advanced takeoff and landing.
- (d) **Instrument Rating or IPC** – (Average 1.3 hr)
- (i) a takeoff and departure;
 - (ii) pilot navigation and tracking;
 - (iii) a hold;
 - (iv) one instrument approach procedure;
 - (v) a missed approach;
 - (vi) a different instrument approach procedure;
 - (vii) three simulated emergencies;
 - (viii) at least one transition to landing.
- (e) **Multi-engine Rating** – (Average 1.1 hr)
- (i) a takeoff, circuit and landing;
 - (ii) high level test items;
 - (iii) emergencies;
 - (iv) returning to the airport of departure for the single-engine arrival and landing.

5.21 Assessment of Flight Test Performance

- (1) The "Performance Criteria" section of each flight test item prescribes the marking criteria. These criteria assume no unusual circumstances as well as operation of the aircraft 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. Speeds and configurations may be varied for better and safer control of an aircraft, in consideration of the actual flight conditions such as turbulence, cross-wind, etc.
- (2) The recommended climb and approach to landing airspeeds in aeroplanes may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with Chapter 523 section 523.63 Climb, General and section 523.73 of the CARs Reference Landing Approach Speed. Chapter 523 of the CARs (FAR 23) is the certification standard for aeroplanes of 12,500 lbs. or less.
- (3) Use of Checklists
 - (a) Throughout the flight test, the candidate is evaluated on the use of an appropriate checklist. Proper use is dependent on the specific task being evaluated. The situation may be such that the use of the written checklist, while accomplishing the elements of an "Aim", would be either unsafe or impractical.

- (b) Vital-action items may be verified from memory and a review of the checklist after the items have been accomplished and the situation is under control is appropriate and desirable. The division of attention between the checklist and lookout for traffic should be considered.
- (4) Tolerances
- (a) Where a candidate exceeds a tolerance specified in the performance criteria because of pilot error or poor technique, but recovers in a timely manner that is appropriate to the situation, the performance pertaining to that criterion may be acceptable and assessed as a “2”, if safety was not compromised.
 - (b) In the case of tolerances for landing distance from a specified point, the candidate is not able to correct or recover when touching down beyond the tolerances.. If the landing distance from the specified point is not more than double the specified tolerance, the examiner will normally assess such a landing as a “2”, on condition that the candidate applied correct and timely approach and landing technique.
 - (c) When a tolerance is exceeded by more than double the specified tolerance because of pilot error or poor technique, the performance will be deemed to be a “1”, even if a correction is made. (When not due to wind/weather, turbulence or traffic conditions). [paragraph 408.18(1)(c) of the CARS]
- (5) Takeoffs and Landings - Aeroplanes
- (a) The accuracy of lateral positioning on the runway during takeoffs and landings will be assessed in accordance with the following criteria:
 - (i) 4 - The fuselage remains over the centerline of the runway/landing surface;
 - (ii) 3 – The wing remains over the centerline of the runway/landing surface;
 - (iii) 2 – The aeroplane is at or drifts to a position where the centerline of the runway/landing surface is beyond the wing tip;
 - (iv) 1 – The aeroplane’s longitudinal axis is at or drifts to more than halfway from the centerline of the runway/landing surface towards the edge of the pavement/prepared surface. Narrower runways will demand more accuracy.
- (6) Arrival to a hover or to a landing without hover - Helicopters
- (a) The lateral and longitudinal accuracy relative to a specific point for an arrival to a hover or to a landing without a hover will be assessed in accordance with the following criteria:
 - (i) 4 – The helicopter is centered over the specific point, whether in hover or on the ground;
 - (ii) 3 – A portion of the main rotor disc remains over the center of the specific point, whether in hover or on the ground;
 - (iii) 2 – The tip of the main rotor disc is beyond the center of the specific point but at a distance that is less than the length of a main rotor blade;
 - (iv) 1 – The tip of the main rotor disc is beyond the center of the specific point at a distance that is more than the length of a main rotor blade.

5.22 Examiner Discretion

- (1) The primary aim of a flight test is to assess a candidate’s competency and use of correct and safe piloting techniques. Nevertheless, deviations from the published criteria due to weather, turbulence, traffic or other situations beyond the control of the candidate must be taken into consideration when assessing the various test items.
- (2) To enhance objectivity and to reduce the need for the examiner to make allowances in assessing such situations the test should, whenever possible, be conducted under normal flight conditions.

5.23 Marking Scales

- (1) For all flight tests other than the flight instructor rating flight test, the 4-point marking scale is used in accordance with the applicable flight test guide;
- (2) For the flight instructor rating flight test the scale is F-3-2-1. Any item assessed the lower of 2 or 1 will determine the final rating class to be awarded. The lowest acceptable level is “3”. Initial Flight Instructors must meet the “3” level but will be issued a Class 4 Flight Instructor Rating until meeting the Class 3 experience requirements stipulated in section 421.70 of the CARs.

5.24 Flight Test Remarks

- (1) Except in the case of the flight instructor rating, written remarks are required when awarding a flight test item a mark of **1 or 2 only**. **Each remark must be numbered to link to the applicable flight test item.**
 - (a) 2 - describe the major error or deviation(s) and make the link to Performance Criteria for the test item as outlined in the flight test guide; or
 - (b) 1 - describe the performance that resulted in an assessment of fail and make the link to *Performance Criteria* made mandatory by the *Aim* statement.
 - (c) 3 – it is desirable to address minor errors identified in an effort to avoid a repetition during future flights.
- (2) The wording of remarks to support a “2” must not describe a performance that would warrant or infer unacceptable performance. The remarks are to be sufficient to inform others, to support subsequent discussion and to justify the mark assigned.
- (3) For the flight instructor rating renewal flight tests, the failure of an item must be clearly supported by a detailed remark as these results may be contested and appealed before the Federal Court of Canada. [Refer: section 401.17 of the CARs, Section 6.8 of the *Aeronautic Act*]. Section 6.8 of the *Aeronautic Act* does not provide for appealing to the Transportation Appeals Tribunal of Canada (TATC).
- (4) During a flight test, it is sometimes difficult to write clear and concise remarks. It is recommended that examiners use notes made during the flight test to complete a final copy of the Flight Test Report. This permits the examiner to refer to the appropriate flight test criterion while writing final comments.

5.25 Post Flight Debriefing

- (1) The candidate will log the flight test flight time as dual flight time as the examiner was the pilot-in-command and was qualified as an instructor. **The dual flight time recorded during the flight test CANNOT be counted towards meeting any of the minimum experience requirements for the permit licence or rating.**
- (2) When a flight test has been completed or discontinued, a thorough debriefing of all phases of the test will be given to the candidate. For a debriefing to be meaningful and beneficial, the examiner must first inform the candidate how the test has been assessed - pass or fail. Words of wisdom and debriefing comments will be useless until the candidate knows this assessment.
- (3) Many industry examiners have found that a good way to inform the candidate that the standards have not been met is to ask the candidate how they feel the test went. The debriefing can then proceed. In order to take full advantage of the examiner’s role of assisting Transport Canada’s quest for improvement of the quality of flight training, it is important that the recommending instructor and, if possible, the CFI be present.
- (4) Depending on the outcome of the flight test, the PE is expected to utilize one of three (3) post-flight briefing methods. The methods are as follows:
 - (a) The traditional method for a routine flight test with only minor errors where a facilitated debriefing would add no value. During the traditional method of debriefing, the PE should highlight

strengths and reward good performance. While it is sometimes easier to concentrate on the negative, the debriefing will have more impact if good performance is recognized and complimented. This will often set a positive tone for the debriefing and open the candidate's mind to suggestions where performance can improve;

- (b) The facilitated method (more in-depth) is used to ensure the underlying threat and error management (TEM) and Single-pilot Resource Management (SRM) or Crew Resource Management (CRM) issues are adequately addressed to promote participation, self-assessment and enhance future performance. The underlying principle for the facilitated debriefing is that adults learn and remember more when they participate actively and make their own analyses rather than when they listen passively. The goals of the facilitated debriefing are the discussion and transfer of the flight test lessons learned to the flight performance. The facilitated debriefing emphasizes self-discovery and self-critique; this approach draws upon the candidate's experience to enhance learning;
 - (c) The facilitated method for failed flight tests should focus on a review of strengths, weaknesses and opportunities for improvement.
- (5) The planning and organization for professional post-flight activities is essential. The debriefing must be valid and comprehensive.
- (a) The candidate should be advised of the outcome as soon as practicable.
 - (b) The recommending instructor should be on hand for the post-flight debriefing.
 - (c) Highlight performance that was well done.
 - (d) Debrief using the flight test report. The debriefing should begin with the strong points and work towards the weaker performance areas. The candidate may express where they did poorly.
 - (e) Facilitation does not require that you withhold your own perspectives, although you should use facilitation to promote self-discovery by the candidate and encourage analysis of their performance to the fullest extent possible. Once the candidate has completed the analysis, you should reinforce what was done well.
 - (f) Using discussion and/or facilitation, within a reasonable time frame, lead the candidate to self-discovery for his or her performance, including threats, errors and error management and methods available to correct the errors and to enhance future performance. Assist the candidate to focus on the actions taken during the flight test by limiting extraneous discussions.
 - (g) Use the flight test guide to explain the reason for assessment of major errors, deviations or unacceptable performance.
 - (h) Offer recommendations to correct any errors or deficiencies.
 - (i) Afterwards, brief the flight instructor on the candidate's performance. This should be completed without the candidate present. Care should be taken not to criticize the instructor.
 - (k) Do not belabour the debriefing; keep it to important points only.
 - (l) Do not get involved in arguments about the conduct of the test or the result. If there is a problem, record the details and actions and inform the Issuing Authority responsible for Flight Operations.

5.26 Handling a Failed Flight Test

- (1) General
 - (a) During the test and the debriefing, actions or comments by the examiner must be respectful toward the candidate. Examiners and candidates should keep in mind that it is not the examiner who fails the candidate, but rather it is the candidate whose performance on that day has not met the minimum skill standards needed to safely exercise the privileges of the licence or rating sought.

- (b) Candidates may become aware or assume that a flight test item has been performed at an unacceptable level. Examiners should encourage candidates to continue provided that the candidate is still eligible for a partial flight test and the candidate is willing.
- (c) Examiners will stop the test when air items are failed and it becomes evident that a complete re-test will be required, unless after being advised, the candidate wishes to complete a few remaining items. This measure could provide additional debriefing points to enhance the possibility of success during retest. Keep this practical from the point-of-view of efficient use of aircraft cost.
- (d) If not satisfied with the outcome of the flight test, a candidate may wish to file a written complaint regarding the conduct of a flight test or the performance of an examiner with the Transport Canada Regional Office responsible for that examiner. In order to succeed with a complaint, the applicant will have to satisfy Transport Canada that the test was not properly conducted. Mere dissatisfaction with the flight test result is not enough. After due consideration of the individual case, the Issuing Authority responsible for Flight Operations may authorize that a re-test be conducted, without prejudice (with a clean record in regard to the disputed flight test), by a CASI or an alternate pilot examiner.
- (e) In the event of the failure of a renewal flight test for a valid flight instructor rating, the Minister is bound by section 401.17 of the CARs which states; "Where, during a flight test, the holder of a valid rating fails to meet the requirements specified in the personnel licensing standards for the lowest class of that rating, the Minister shall suspend the rating." The examiner will initiate the suspension process by contacting the Regional Office no later than the next working day to report the failure. The Regional Office will then issue a formal Notice of Suspension to the candidate in accordance with SI-SUR-016.
- (f) ~~DO NOT STRIKETHROUGH ANY PRIVILEGE ON A CANADIAN AVIATION DOCUMENT~~
- (g) A pilot licence, including any ratings or endorsements attached to that licence, is a Canadian Aviation Document (CAD). The powers to suspend, to cancel or to refuse to renew a CAD, or any of its additional privileges, are set out in the *Aeronautics Act*.
- (h) Section 6.8 of the *Aeronautics Act* states: "In addition to any grounds referred to in any of sections 6.71, 6.9 to 7.1 and 7.2 of the *Aeronautics Act* 1, the Minister may suspend, cancel or refuse to issue, amend or renew a Canadian aviation document in the circumstances and on the grounds prescribed by regulation of the Governor in Council". (e.g.: section 401.17 of the CARs) Section 6.8 of the *Aeronautics Act* has no provision for appeal before the Transportation Appeal Tribunal of Canada (TATC). The only avenue for appeal of a failure for which a candidate has not reached a resolution with Transport Canada is an appeal before the Federal Court of Canada.
- (i) The Federal Court may be contacted at: Federal Court, Ottawa, Ontario Canada K1A 0H9.

5.27 Flight Test Records

- (1) The Flight Test Report form provides Transport Canada with a Flight Test Record for all flight instructors and examiners. The record resides in the "Flight Training and Aeronautical Education" (FTAE) program.
- (2) This information is an extremely valuable tool used to monitor flight tests and permits analysis for trends in assessment, weak areas, and evaluation errors. Added emphasis can be given to national weak areas at standardization workshops and Flight Instructor Refresher Courses. Explanation and use of the Flight Test Record form will be covered in detail during initial examiner training.

5.28 Flight Test Reports

- (1) Flight test reports must be completed in full, including the FTU code, where applicable, by ensuring that the scannable marking circles are clearly filled with black ink without spilling over.
- (2) Ensure that the TOTAL MARKS figure is correct, otherwise the report will be returned to the PE for correction.

- (3) The receipt number for the fee charged must be noted on the flight test report.

5.29 Follow-Up and Administration

- (1) After the conduct of a flight test, the examiner must complete follow-up and administrative duties.
- (2) These include the following:
- (a) provide feedback to the recommending Instructor or Chief Flight Instructor of the FTU, if they were not present during the post flight debriefing;
 - (b) confirm and clarify with the FTU any recommended retraining requirements; and
 - (c) submit the flight test report no later than 5 working days after the flight test;
 - (d) discuss any identified training trends with either the FTU or the Issuing Authority responsible for Flight Operations

5.30 Instructions for Completion of Flight Test Reports

- (1) General
- (a) In most cases, the Flight Test Report used in conjunction with other forms:
 - (i) “Application for Flight Crew Permits/Licences” (26-0194) for the initial issuance of a flight crew permit or licence;
 - (ii) “Flight Crew Permit/Licence - Application for Endorsement of a Rating” (26-0083) to initiate the initial issuance of a licence with the appropriate of flight instructor rating, instrument rating, aeroplane class rating, or helicopter type rating;
 - (iii) In the case of the ultra-light aeroplane passenger carrying rating, the combined form “Ultra-light Aeroplane Flight Test Report/Application for Passenger Carrying Rating”(26-0667) is used to initiate the initial issuance of the passenger carrying rating;
 - (iv) In the case of the flight instructor rating – ultra-light aeroplane, the form “Flight Crew Permit/Licence – Application for Endorsement of a Rating” (26-0083) is used for the initial issuance of a flight instructor rating –ultra-light aeroplane.
 - (b) The report is used to record the results of flight tests required for the issuance of a permit or licence and for the issuance or renewal of flight instructor ratings or instrument ratings.

Note: Pilot Examiners will use the Flight Test Report – Instrument Rating (26-0526) when conducting instrument rating flight tests. PE’s are not to use the “Pilot Proficiency Check” (26-0249) report form unless they also hold authorization as an Approved Check Pilot (ACP).

- (2) Assessment
- (a) Complete the assessments by filling in the computer scannable circle in the column designated for the mark awarded. Number the remarks to link them to the pertinent flight test item.
 - (i) 4 - no remarks required;
 - (ii) 3 - no remarks required;
 - (iii) 2 - supporting remarks required;
 - (iv) 1 - supporting remarks required.
- (3) Completion of Blocks

Note: Some of the details listed below may not apply to all Flight Test Reports.

- (a) **Name of Applicant** - Use legal name (same as pilot licence/permit). File number is the same as licence number (all 6 digits including zeros); fill in appropriate computer scannable circles.

- (b) **Change of Address** – On the Instrument Rating flight test form, fill in the computer scannable circle and enter new address in the remarks area, in the event of address change. Please include the postal code and if available the home phone number of the candidate.
- (c) **Date** - Enter the date when the flight test is completed in a Day/Month/Year format, using two digits for each; fill in appropriate computer scannable circles.
- (d) **Name of Instructor recommending** - Use legal name (same as pilot licence). File number is the same as licence number (all 6 digits including zeros); fill in appropriate computer scannable circles. If the recommending instructor is freelance (not associated with a FTU), fill in the circle for Freelance.
- (e) **Name of Examiner** - Use legal name (same as pilot licence/permit). File number is the same as licence number (all 6 digits including zeros); fill in appropriate computer scannable circles.
- (f) **Flight Training Unit** - Name of training unit to be entered in addition to the training unit's 4 digit code, fill in the appropriate computer scannable circles.
- (g) **Aircraft Type and Registration** - enter the aircraft type designator as per subpart 421 of the CARS, Appendix A and enter the aircraft's full registration.
- (h) **Flight Test Times** – Enter times and fill in the computer scannable circles
- (i) **Simulator or FTD Type** - enter the specific type of approved simulation device, its level and the simulation device identification number.
- (j) **Instrument Rating** – Enter the instrument rating group, appropriate to the category and class of aircraft, and fill in the circle signifying an initial, renewal or partial test, as applicable.
 - (i) Group 1 – Conventional multi-engine aeroplane.
 - (ii) Group 2 – Center-line thrust multi-engine aeroplane.
 - (iii) Group 3 – Single-engine aeroplane.
 - (iv) Group 4 - Helicopter
- (k) **Private, Commercial, Int. Commercial (Integrated) or Partial Test** – fill the computer scannable circle, as applicable, including dual and solo times.
- (l) **Center-line Thrust** – If the aeroplane to be used for the Multi-engine Class Rating flight test has a center-line thrust design, fill in the circle for Center-Thrust. This will result in the issuance of a restricted rating.
- (m) **Flight Test Region** – fill in the computer scannable circle, as applicable.
- (n) **Medical Expiry Date** – Enter the medical expiry date.
- (o) **Flight Instructor Rating** – Fill in circle for Initial, Renewal or Upgrade, as applicable.
- (p) **Emergency section** - The examiner enters, in his/her words, a brief description of each abnormal and emergency procedure. (e.g.: A, B and C if multi-engine, or B, C and D if single-engine).
- (q) **IPC Valid To** - An Instrument Proficiency Check is valid for a period of 24 months, date to date from the date on which the check was completed. Enter the applicable day, month and year in the "Remarks" column.
- (r) **Instructor Valid to** - A Class 4 Flight Instructor Rating is valid to the end of the first day of the 13th month following the month in which the flight test was conducted. A Class 3 Flight Instructor Rating is valid to the end of the first day of the 25th month following the month in which the flight test was conducted. A Class 2 Flight Instructor Rating is valid to the end of the first day of the 37th month following the month in which the flight test was conducted. A Class 1 Flight Instructor Rating is valid to the end of the first day of the 49th month following the month in which the flight test was conducted. Enter the applicable month and year.

- (s) **Passed/Failed** – The Passed or Failed circle must be darkened as appropriate.
- (t) **Signature of Examiner** – The examiner will sign this block of the form.
- (u) **Receipt No.** - enter the number of the receipt given to the candidate for fees received. This applies to all examiners. Issue a numbered receipt that meets the requirements of accepted accounting practices.
- (v) **Ultra-light Aeroplane** – Part C – Experience – flight test candidate must enter times and sign and date the form as indicated.
- (w) **Ultra-light Aeroplane** – Part D – Certification of Passenger Carrying Privileges – to be completed by an Authorized Person.

Note: Due to tolerances of the computer scanner only original printed forms can be scanned. Marks or holes on blue lines will cause scanning problems. When filling in the circles, ensure they are completely filled in and do not go outside the circles or scanning problems could occur.

5.31 Administrative Process

- (1) Upon completion of the Flight Test Report, the examiner may provide a copy to a successful candidate or upon request to any other party named on the report. If the flight test was assessed 'fail', the candidate must receive a copy of the flight test report for admission to a partial flight test and to ensure that any supplementary training is applied to the correct flight test item(s). The examiner will keep a file copy. Copies of all flight test reports must be kept for a period of at least two years.
- (2) In the case of permits or licences, "Application for Flight Crew Permits/Licences" (26-0194), and "Application for Endorsement of a Rating" (26-0083) forms are completed by Authorized Persons in accordance with the Personnel Licensing Procedures Manual.

Note: These forms will only be received by examiners holding an Authorized Person authority **after the successful completion of the applicable flight test and the applicant having met all of the licensing requirements.**

- (3) Pilot Examiners authorized to conduct multi-engine class rating, instrument rating or instructor rating flight tests may also be delegated Authorized Person's privileges on their Letter of Accreditation.
- (4) In the case of the multi-engine class rating, instrument rating or instructor ratings, except in the case of the ultra-light aeroplane flight instructor rating, the examiner will endorse the applicant's aviation document with the additional privileges or issue a "Certification of Additional Privileges" card (26-0267), and submit the completed "Application for Endorsement of a Rating" (26-0083) form in accordance with the Personnel Licensing Procedures Manual.
- (5) Transport Canada will only issue a Multi-engine Class Rating, an **initial** instrument rating, an initial flight instructor rating – ultra-light aeroplane or an initial or **upgrade** of a Flight Instructor Rating when the following are submitted together:
 - (a) The completed "Application for Endorsement of a Rating" (form 26-0083),
 - (b) The \$30 fee; and
 - (c) The "Flight Test Report".
- (6) For the renewal of Flight Instructor Ratings, except for flight instructor ratings-ultra-light aeroplane - the \$30 fee must accompany the Flight Test Report.

6.0 PASSENGER-CARRYING RATING – ULTRA-LIGHT AEROPLANE

- (1) The following information supplements the information in the flight test guide and expresses more clearly the intent of the flight test items. The information should assist the examiner in conducting a valid and thorough flight test and aid in making accurate assessments of the candidate's skill and knowledge.

- (2) Examiners should review the applicable flight test qualification standards prior to conducting a flight test to ensure the appropriate standards are being applied.
- (3) A brief summary or overview of the flight test items required on the Ultra-light Aeroplane flight test follows.

6.1 Aircraft Familiarization

- (1) Ensure that questions asked are relative to the aircraft being used for the flight test.
- (2) Documents
 - (a) Since the flight test can be done in aircraft ranging from a powered parachute aircraft to a certified aircraft, required documentation will differ.
- (3) Aircraft Performance and Limitations/Weight and Balance
 - (a) The candidate may use the operating manual to determine information other than essential performance speeds listed in the flight test guide as memory items. Record memory item speeds – normal climb speed(s), stall speed in the landing configuration, normal approach speed(s), and never exceed speed – so that during the flight test the actual speeds flown in the exercises can be assessed. Questions relating to the operating manual should be “operational” questions, particularly if the conditions of temperature, wind strength, airport elevation etc. existing at the time of flight test can be utilized.
 - (b) Weight and Balance is a practical exercise. Relate the weight and balance question to the proposed flight.
 - (c) The candidate should also be asked to correct an out of C of G situation and questioned to determine understanding of extreme C of G locations and the resulting effect on aircraft handling and performance.

6.2 Preparation for Flight

- (1) Pre-Flight Inspection
 - (a) After the candidate has completed the pre-flight inspection, the candidate will be asked a few questions relating to the flight test aircraft. The candidate should be questioned to determine what appropriate action would be taken if an unsatisfactory item were detected during the pre-flight inspection. The candidate is expected to visually confirm that there is sufficient fuel and oil for the actual intended flight. It is intended that this visual check be an actual check of the tank (or tanks) as opposed to just a check of the fuel gauges. The verification of fuel and oil levels will be performed in accordance with the operating manual. If the aircraft design precludes a visual check, fuel chits, fuel logs, or other credible means, which in the examiner’s judgment meet the confirmation requirement, will be acceptable.
 - (b) The candidate is expected to conduct a passenger safety briefing at this time. Should the candidate omit the briefing, the examiner will ask for one. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing. Items to be included on the passenger briefing are listed in section 602.89 of the CARS.
- (2) Engine Starting and Run-up, Use of Checklists
 - (a) Check to see if the candidate uses the checklist provided in the aircraft. If the examiner does not agree with the content of the checklist, the candidate should not be penalized. This would be an item for the examiner to discuss with the instructor of the training unit and, if necessary, the Issuing Authority responsible for Flight Operations. The checks carried out should include at least the items mentioned in the operating manual. The candidate should be questioned to determine what action would be taken if the checks revealed a problem.

- (b) Powered Parachute Candidates: must make sure that the canopy and riser system is laid out properly and in condition for inflation.
- (3) Ancillary Controls (Operation of Aircraft Systems)
 - (a) The candidate should be knowledgeable concerning the use of ancillary controls fitted to the aircraft used for the flight test. The candidate should be asked to explain at least one of the aircraft systems on board the aircraft, namely, primary flight controls and trim, flaps, power plant including carburetor heat and mixture controls, fuel or oil system, electrical system, avionics systems, vacuum/pressure system, pitot-static system and associated flight instruments or any other system particular to the aircraft.

6.3 Taxiing (and Canopy Inflation for Powered Parachutes)

- (1) If significant wind exists, the candidate is expected to correctly use the controls to minimize the risk of an upset. If the test is conducted under zero or light wind conditions, it is appropriate that, while taxiing, the candidate be asked to demonstrate how the controls should be held under varying wind conditions, for example crosswind, or a wind blowing from a front or rear quarter. Except when making minor left and right turns to verify proper functioning of the flight instruments and when other traffic and conditions permit, the candidate is expected to make use of the center-line markings on taxiways, where available.
- (2) **Powered Parachute Candidates:** must show knowledge of the elements of canopy inflation and taxiing.
- (3) **Seaplane Candidates:** will be required to demonstrate taxiing at slow speeds, on the step, sailing, docking or beaching, a simulated or actual approach to a buoy (mooring), and turns to downwind and into wind.

6.4 Take off

- (1) It is recommended that the examiner not request a specific take-off, rather it is recommended that the examiner request that the candidate conduct a take-off using the correct procedures for the actual wind condition, runway surface and length. This may mean a soft field, short field, crosswind, normal or a combination take-off.
- (2) Aircraft configuration and airspeeds utilized should be those specified in the operating manual, taking into consideration existing conditions. If the candidate uses an airspeed that varies from the recommended speed, they must be able to explain why.
- (3) **Powered Parachute Candidates:** will be expected to confirm, before take-off, that the canopy is fully inflated and suspension lines are straight with no twists or tangles.
- (4) **Seaplane Candidates:** while it will not always be possible to assess the candidate's ability to conduct a glassy-water takeoff, if real glassy-water conditions are available in proximity to the take-off site, an effort should be made to carry out this procedure.

6.5 Stall

- (1) Recovery from the stall exercise will be completed at the height recommended by the manufacturer, or no less than 2,000 feet above ground level, **whichever is the greater**.
- (2) The examiner must be aware of the manufacturer's recovery recommendations for the type of aircraft to be used on the flight test.

6.6 Pilot Navigation

- (1) The aim of this exercise is to confirm that the candidate can use an aeronautical chart to effectively navigate from one place to another (map read).

- (2) The examiner will assign the destination and the candidate will carry out this exercise. This is not a test of pure navigational skills but is an assessment of ability to proceed to a destination using mental dead reckoning and available geographic features such as rivers, roads, railway tracks etc.
- (3) Care must be taken in assigning this exercise. Candidates are not expected to be aware of their exact location after carrying out high altitude flight test manoeuvres. The examiner must allow time, and if required, be of some assistance while the candidate arranges the chart and determines their exact location. Following this procedure, the examiner will assign a destination.
- (4) With respect to the estimated time of arrival, and the actual time of arrival at the proposed destination, no hard numbers have been established as criteria. Examiners may accept an estimated time of arrival for this exercise which is reasonable, and which would ensure that a successful trip to the chosen destination could be made. Many examiners have the candidate fly the complete exercise to the selected site in order to carry out the precautionary landing exercise at that site. In this case the site should be an airstrip that is unfamiliar to the candidate.

6.7 Precautionary Landing

- (1) This exercise is not to be used as an emergency procedure and the scenario used by the examiner should not indicate such conditions to the candidate. The examiner will assign a potential landing area, and the candidate will confirm the selected site as being suitable for landing or not by carrying out an inspection.
- (2) The aim of the exercise is for the candidate to be able to carry out an organized procedure to determine the suitability of an unfamiliar airstrip. Provided the procedure used is organized and logical and the aircraft configuration is as stipulated in the operating manual, examiners should not be adversely influenced if the procedure varies slightly from their preferred procedure.

6.8 Forced Landing

- (1) The engine failure will be simulated in accordance with the method recommended by the manufacturer. If practical, the engine failure should be simulated from 3,000 ft. AGL and without advance warning from the examiner. The examiner should ensure that some choice of landing area exists within the field of vision of the candidate and within gliding range of the aircraft. Provided the aim of the exercise is accomplished in an organized manner, the examiner should not be adversely influenced if the procedure used varies slightly from the examiner's preferred procedure.
- (2) As this is a simulated procedure, the candidate will be expected to demonstrate good airmanship by clearing the engine at appropriate intervals during the descent. During cold winter conditions, where the flight test aircraft is equipped with flaps, the practice of leaving some power on and achieving a normal descent angle and airspeed by using flap is acceptable. Examiners should determine during the pre-flight briefing the candidate's intention with regard to the procedure to be used during this item.
- (3) Occasionally a candidate will, after commencing the forced landing, indicate a preference for another landing area. Normally a change in the intended landing area during the approach is not acceptable, as one of the main items the examiner assesses during this test item is the candidate's ability to fly a gliding approach to a pre-selected landing area. The only condition under which a change of site would be acceptable would be when the change was made from an altitude and a point in the approach that a landing could still have been made on the original landing area. Such a change would be acceptable if upon reaching the lower altitude, the candidate observed an obstruction on approach or that field surface conditions were not suitable and such conditions were not apparent when the approach as commenced, but another suitable or obstruction free area is selected.

6.9 Overshoot

- (1) The overshoot may be called for and assessed from a landing approach, the forced landing or precautionary landing. Where the operating manual recommends an aircraft configuration, a procedure and airspeeds, they must be used.

6.10 Emergency Procedures

- (1) If the flight test aircraft is one with which the examiner is not thoroughly familiar, the operating manual should be studied before asking the candidate to demonstrate the ability to deal with various simulated emergencies.
- (2) Examiners should use a random sampling system, varying the emergency procedures requested to prevent the examiners flight test from becoming predictable to candidates, and to ensure all emergency procedures have been covered in training.
- (3) One method of testing an emergency procedure on the ground that many examiners find effective is to assess this item either prior to engine start-up or upon returning to the apron, just before or after the engine is shut down. If shutdown, the examiner places the throttle, mixture, related switches, and the various ancillary controls etc., in the position they would normally be in for an engine running at cruise power. The examiner will then describe to the candidate, an emergency situation such as an engine fire. The examiner may then make an assessment based on how the candidate actually positions the appropriate controls, switches or valves associated with the drill rather than assessing a rote statement of how things should be done. Using this method should preclude a student from receiving a favourable assessment based on the ability to recite an emergency drill when, in fact, they have no understanding or appreciation of the action the drill requires.
- (4) Only one emergency is required for the ultra-light aeroplane flight test.
- (5) **Seaplane Candidates:** The examiner will assess the ability to recognize and recover from abnormal situations, such as, a dig, a bounce, a submerging float and porpoising.

6.11 Circuit

- (1) Evaluation of this item will be based on the candidate's demonstration of correct circuit procedures for any of the aerodromes being used for the flight test.
- (2) This exercise must be assessed on a continuing basis throughout the flight test and a mark awarded only after the final landing. This will ensure that the candidate is assessed on the departure and entry procedures as well as a complete circuit after a take-off leading to a landing.

6.12 Approach and Landing

- (1) For the assessment of a candidate's ability to land within a pre-determined touchdown zone it is not intended that examiners turn this item into a spot landing exercise. The main aim of the item is to determine that correct procedures and techniques are used in addition to achieving some accuracy.
- (2) **Seaplane Candidates:** while it will not always be possible to assess the candidate's ability to conduct a glassy water approach and landing, if real glassy water conditions are available in proximity to the landing site, an effort should be made to carry out this procedure.

6.13 Slipping

- (1) During the normal course of the flight test, there are a number of opportunities to assess the slipping manoeuvre, such as during a forced landing approach, the landing approach or the precautionary approach.

- (2) Examiners should vary their request from candidate to candidate to confirm the status and extent of training actually being given by the FTUs.
- (3) Any significant skidding manoeuvre is not acceptable.

7.0 PILOT PERMIT-RECREATIONAL- AEROPLANE

- (1) The following information supplements the information in the flight test guide and expresses more clearly the intent of the flight test items. This information should assist the examiner to conduct a valid and thorough flight test and aid in making accurate assessments of the candidate's knowledge and skill.
- (2) Examiners conducting the RPP flight test should be very familiar with the process, flight test items and acceptable standards of the Private or Commercial-Aeroplane Flight Tests. With respect to the RPP Flight Test, a degree of familiarization with the content and acceptable standards is required. The differences in how the various items are tested, and the acceptable standards to be applied on an RPP flight test are significant.
- (3) When evaluating knowledge and skill, examiners must be careful to request demonstrations and apply standards that are appropriate and valid for the Pilot Permit - Recreational - Aeroplane and not the more familiar private or commercial pilot licence flight test requirements.
- (4) Examiners should review the applicable flight test standards prior to conducting a flight test to ensure the appropriate standards are being applied. This review will prevent differences from effecting the reliability and validity of the assessments awarded.
- (5) A brief summary or overview of the flight test items required on the RPP flight test, and the differences from the flight tests most examiners are used to conducting are as follows.

7.1 Ex.2 – Aeroplane Familiarization and Preparation for Flight

- (1) Documents and Airworthiness
 - (a) Ensure that questions asked are practical and relate to the aircraft being used for the flight test.
- (2) Aeroplane Performance
 - (a) The candidate may use the Pilot Operating Handbook to determine information **other** than essential performance speeds listed in the flight test guide as memory items.
 - (b) Record the answers given to questions regarding the best angle of climb speed, best rate of climb speed, and manoeuvring speed so that during the flight test, the actual speeds flown in the appropriate items may be compared. Questions relating to the Pilot Operating Handbook should be “operational” questions, particularly if the conditions of temperature, wind strength, airport elevation, etc. existing at the time of flight test can be utilized.
- (3) Weight and Balance, Loading
 - (a) Make this a practical exercise and relate the weight and balance problem to the proposed flight. The loading assigned should require the candidate to correct a situation where the total weight or the center of gravity (C of G) is slightly beyond limits and some rearrangement or a reduction of the load is required to bring the weight or balance within limits.
 - (b) The candidate should also be questioned to determine the understanding of extreme C of G locations and the resulting effect on aircraft handling and performance.
- (4) Pre-Flight Inspection
 - (a) After the candidate has completed the pre-flight inspection, practical questions relating to the flight test aeroplane used should be asked. The candidate should be questioned to determine what appropriate action would be taken if an unsatisfactory item were detected during the pre-flight inspection. A failure by the candidate to visually confirm that there is sufficient fuel and oil for the actual intended flight is disqualifying and will constitute a failure of the flight test (Safety

issue). It is intended that this visual check be an actual check of the tank(s) as opposed to just a check of the fuel gauges. The verification of fuel and oil levels will be performed in accordance with the manufacturer's recommendations in the POH/AFM.

- (b) If the aircraft design precludes a visual check, fuel chits, fuel logs, or other credible means, which in the examiner's judgment meet the confirmation requirement, will be acceptable.

Note: The candidate is expected to state the flight endurance at normal cruising speed with the fuel on board. **"How much flight time with the fuel in the tank(s)?"**

- (c) The candidate is expected to conduct the oral passenger safety briefing at this time. Should the candidate omit the briefing, the examiner will ask the candidate to provide one. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing.

(5) Engine Starting and Run-up and Use of Checklists

- (a) Check to see if the candidate uses the checklist provided for the aeroplane. If the examiner does not agree with the content of the checklist, the candidate should not be penalized. This would be an item for the examiner to discuss with the CFI of the training unit, and if necessary the Issuing Authority responsible for Flight Operations.
- (b) The checks carried out should include at least the items mentioned in the applicable POH/AFM. The candidate should be questioned at this time to determine what action would be taken if the checks revealed a problem, (e.g. excessive magneto drop, instruments not indicating a change when mixture or carburetor heat controls, etc. are selected and/or reset).
- (c) The requirement to ensure correct control surface movements is imbedded in the *Aim* and is a mandatory part of the checks.

Note: A check of flight controls for freedom and correct movement of the corresponding control surfaces is mandatory and will be conducted before flight. Should the candidate neglect this check, the examiner will ask the candidate to perform it and a major error will be noted.

7.2 Ex.3 - Ancillary Controls

- (1) The candidate should be knowledgeable concerning the use of the carburetor heat, mixture control and any other ancillary controls fitted to the aeroplane used for the flight test. Leaning procedures should be examined during the flight. The use of the mixture control to smooth out rough running following the application and removal of carburetor heat should be assessed in flight, if such conditions exist, or be examined by practical questioning. The practical use of heating and ventilation controls should also be evaluated.

7.3 Ex.4 – Taxiing

- (1) If significant wind exists, the candidate is expected to correctly use the controls to minimize the risk of an upset. If the test is conducted under calm or light wind conditions, it is appropriate, while taxiing, that the candidate be asked to demonstrate how the controls should be held under strong wind conditions from various directions. Except when making minor left and right turns to verify proper functioning of the flight instruments and when other traffic and conditions permit, the candidate is expected to make use of the centerline markings on taxiways, where available.

7.4 Ex.11 – Slow Flight

- (1) Flight Instructors must impress upon the students that when a stall warning activates at lower altitudes, immediate action must be undertaken to resume safe flight by providing a safe margin above the stall speed.

- (2) The objective of flight near minimum controllable airspeed, at a safe altitude, is to assess the candidate's competency to sense the decrease in wing performance resulting from operations at high angles of attack, identify a condition that could lead to an imminent stall and to control the aeroplane while avoiding a stall. Flight near minimum controllable airspeed with the stall warning intermittently activated or with buffeting while maintaining control and altitude presents the best situation for identifying slow flight ("Slow Flight" is defined as the range of speeds between the airspeed for maximum endurance and a speed immediately above the stalling speed with full power. It is also known as flight on the back-side of the power curve, requiring more power to go slower.)
- (3) The use of power and a reduced weight will lower the actual stall speed below the stall speed quoted by the POH, allowing a margin for safety. A small increase in airspeed while turning or in turbulence is acceptable as the stall speed increases in these conditions. Good heading control and a recovery to straight and level flight is expected.
- (4) Avoid prolonged periods in slow flight to prevent possible overheating of some engine components. The RPP candidate is not required to manoeuvre or execute turns in slow flight. Refer to the definition for "flight near minimum controllable airspeed" on Page 12 of this document.

7.5 Ex.12 – Stall

- (1) The stall may be entered from various flight conditions, such as a stall from slow flight, a cross-controlled stall, a climbing turn stall, a stall in a steep turn or a stall from a simulated overshoot (with full-power) from a full flap approach in a landing configuration.
- (2) During stalls, some wing drop is acceptable but adequate control of yaw with rudder is mandatory. Negative G. loading and excessive nose-down pitch attitudes during the recovery are unacceptable. To avoid being predictable and to ensure comprehensive training of this exercise, it is recommended that the requested stall differ from candidate to candidate.
- (3) Recovery from the stall must be completed above the minimum height recommended by the manufacturer or no less than 2,000 feet above ground level, whichever is the greater.

Note: All attempts to control wing drop and yaw by using **abrupt and full** opposite aileron control are unacceptable.

7.6 Ex.14 –Spiral

- (1) Care must be exercised during this flight test item to ensure that the candidate does not allow the aircraft to exceed airspeed or flight load factor limitations. The examiner should enter this manoeuvre from slow cruise, climbing turns, or from turns during slow flight to provide a greater margin of safety.
- (2) Before initiating the spiral dive, the examiner is not to indicate or state the manoeuvre that is about to be assessed, but simply advise the candidate to return the aircraft to straight and level flight on the command, "You have control". Ensure that flaps are retracted.
- (3) Recovery should be completed without excessive airspeed, above the minimum height specified by the manufacturer, or no less than 2,000 feet above ground, whichever is the greater.

7.7 Ex.15 – Slipping

- (1) Should the candidate not demonstrate slipping during some phase of the test, you will request that the candidate demonstrate the use of a forward slip or a slipping turn to increase the rate of descent without any significant increase in airspeed.
- (2) You should vary your request from candidate to candidate to confirm the status and quality of training actually being given by the FTU.

- (3) A forward slip out-of-wind during an approach to land in **significant** crosswind conditions is indicative of poor technique.

Note: Any significant skidding manoeuvre is unacceptable. (Critical Error)

7.8 Ex.16 – Takeoff

- (1) It is recommended that you not request a specific takeoff; rather it is recommended a scenario be used so the candidate has to decide what procedure to use. When testing a takeoff other than a normal takeoff, ensure that the simulated runway length, surface conditions and obstacles in your scenario are clear to the candidate. For example, if you wish the candidate to perform a soft-field takeoff, make certain that the simulated conditions you specify for the surface clearly lead the candidate to conclude that a soft-field technique is necessary.
- (2) Soft-field takeoff technique should be as recommended in the POH/AFM or as recommended in the Flight Training Manual (Page 92) – Takeoffs from Soft or Rough Surfaces.
- (3) While it may not always be possible to assess the candidate's competence to compensate for a crosswind, every effort should be made to carry out this procedure. It may be necessary to request a runway other than the one in use, or it may be possible to use a nearby airport where a crosswind condition does exist.
- (4) Aircraft configurations and airspeeds utilized should be those specified in the Pilot Operating Handbook, taking into consideration existing conditions. The recommended climb speeds may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with section 523.63 of the CARs Climb, General.
- (5) Prior to the takeoff, in the interest of better cockpit coordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, take-off considerations and procedures to be used in the event of an actual engine failure during the takeoff and initial climb. The crew briefing is not part of the take-off evaluation but is essential for safety in the event of an actual emergency.

7.9 Ex.17 – Circuit

- (1) Evaluation of this item will be based upon the candidate's demonstration of correct circuit procedures for the aerodrome being used for the flight test.
- (2) This item must be assessed on a continuing basis throughout the flight test and a mark awarded only after the final landing. This will ensure that the candidate is assessed on the departure and entry procedures as well as a complete circuit after a takeoff leading to a landing.

7.10 Ex.18 – Approach and Landing

- (1) As indicated in Exercise 16, ensure that the simulated conditions you specify in your scenario clearly indicate to the candidate the type of landing to be used.
- (2) Make every effort possible to utilize a runway where a crosswind condition exists in order to assess crosswind-landing technique. If you are at a busy airport, it may be possible to go to a nearby airport to carry out crosswind landings.
- (3) Although full-flap landings are expected, a crosswind component of 75% or greater of the maximum demonstrated crosswind figure would justify using less than full-flap extension, depending on the suitability of the landing surface. Rough or soft-field surfaces may still warrant full-flap extension.
- (4) The recommended approach to landing airspeed may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with Chapter 523 section 523.73 of the CARs Reference Landing Approach Speed.

- (5) The candidate should maintain an approach profile that will result in airspeed of $1.3 V_{SO}$, or the minimum safe speed for existing conditions, when going through the “approach window” at 50 feet above the threshold. If the wind conditions dictate an increased speed or thermal lift is encountered over the runway some aeroplane types may exhibit a tendency to float in ground effect. In these cases, the candidate should not be assessed a mark of “1” for exceeding the touch-down distance tolerance in the criteria, up to a maximum of double the specified distance if correct and timely approach and landing techniques are used, but should be awarded a mark of “2” with a justifying remark stating the facts of what happened. More than doubling the specified value due to pilot error or poor technique is disqualifying.
- (6) In assessing the candidate's skill at landing within a pre-determined touchdown zone, it is not intended that examiners turn this item into a spot-landing exercise. The main aim of the item is to determine that correct procedures and techniques are used in addition to achieving a fair degree of accuracy. Should the candidate realize that a short-field landing at the intended touchdown point couldn't be achieved, an overshoot, **initiated prior to commencing the flare**, for a second attempt is acceptable.
- (7) Rough technique and hard landings in an attempt to “plant” the aeroplane into the touchdown zone are unacceptable. Soft-field landing technique should be as recommended in the POH/AFM or the Flight Training Manual (Page 109) Soft and Unprepared Field Landings. Further information is available for “Operations on Runways with Unpaved Surfaces” by referring to:
<http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acsc-700-700-011-1481.htm>

Note: “Touch and go” landings are not to be used for evaluating the candidate's performance of the required landings and takeoffs.

- (8) The overshoot (18C) may be assessed from any of the landing approaches, the forced landing approach or the precautionary landing approach.

7.11 Ex.21 – Precautionary Landing

- (1) **This item on the RPP flight test is not to be used as an emergency procedure and the scenario used by the examiner should not indicate such conditions to the candidate.**
- (2) On the RPP test, the examiner will assign a landing area, and the candidate will confirm the selected site as being suitable or unsuitable for landing by means of an inspection.
- (3) The aim of this item is to carry out the procedures for a safe landing in a suitable area. Provided that the procedure used is organized, logical and the aircraft configuration is as recommended in the Pilot Operating Handbook, you should not be adversely influenced by a procedure that varies from your own. When a suitable aerodrome is available, candidates should be asked to demonstrate a short or soft field landing (Exercise 18) in order to evaluate them on this item, along with the precautionary approach.
- (4) Where the precautionary landing procedure is carried out at an airport, it is mandatory for the candidate to respect accepted circuit-joining procedures. [Refer: section 602.96 of the CARs and A.I.M. RAC 4.0 – Airport Operations.]

7.12 Ex.22 – Forced Landing

- (1) The engine failure will be simulated in accordance with the method recommended by the manufacturer. Engine failure should be simulated by closing the throttle at approximately 3,000 feet AGL, if practicable, without advance warning from the examiner. The examiner should ensure that some choice of landing area exists within the field of vision of the candidate and within gliding range of the aircraft. Provided the aim of the item is accomplished in an organized manner, the examiner should not be adversely influenced if the procedure used varies from the examiner's preferred procedure. In all cases, advise the candidates of the emergency by stating “simulated engine failure”.

- (2) The candidate is expected to establish the aeroplane in a glide at the recommended airspeed, but is permitted to then increase that speed, as required, without exceeding any airframe limitations (i.e. V_{FE}), to permit a successful and safe approach towards a touchdown zone in the first 1/3 of a suitable landing area. An approach that would have touched down more than 1000 feet beyond the touchdown zone will be evaluated as a 2 or less.
- (3) As this is a simulated procedure, the candidate will be expected to demonstrate good airmanship by clearing the engine at appropriate intervals during the descent. During cold temperature conditions, the practice of leaving some power on and achieving a normal descent angle and airspeed by using flap is acceptable. Examiners should determine, during the pre-flight briefing, the candidate's intention with regard to the procedure to be used during this item.
- (4) Occasionally a candidate will, after commencing the forced landing, indicate a preference for another landing area. Normally, a change of intended landing area during the approach is not acceptable, as one of the main competencies the examiner is required to assess during this test item is the candidate's ability to fly a gliding approach to a pre-selected landing area.
- (5) A change of field is only acceptable from an altitude or point in the approach from which a landing could still have been made on the originally-selected landing site. Such a change would be acceptable if upon reaching the lower altitude, the candidate observed an obstruction on approach or that field surface conditions were not suitable and such conditions were not apparent when the approach was commenced, but another suitable or obstruction free area is selected.

7.13 Ex.23 – Pilot Navigation

- (1) Examiners conducting the RPP flight test will notice that pilot navigation is not a four-part item. For this test, Exercise 23 requires the examiner to assess only one area and assign the one mark for navigation.
- (2) The Aim of this item is to confirm that the candidate can effectively navigate from one place to another by pilotage (map reading).
- (3) The examiner will assign a destination and the candidate will carry out this flight towards that destination at altitude. Remember this is not a test of pure navigational skills but is an assessment of ability to proceed to a destination using mental dead reckoning and natural geographic features such as rivers, roads, railway tracks, etc., where available.
- (4) Rulers, notched pencils, protractors, and computers will not be used for this procedure. The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading. Once Ex. 23 has been completed and assessed, electronic aids may be used for the return to base.
- (5) Care must be taken with respect to this item. The candidates are not expected to be aware of their exact location after carrying out a series of other higher-altitude flight test manoeuvres. The examiner must allow time, and if required, be of some assistance while the candidate arranges the chart and determines their exact location and regains orientation. Following this procedure the examiner will assign the destination.
- (6) With respect to the estimated time of arrival and the actual time of arrival at the destination, no hard numbers have been established in the criteria. Examiners may accept an estimated time of arrival for this item that is reasonable and would ensure that a successful trip to the chosen destination could be made. Some examiners have the candidate fly the complete flight to the selected site in order to carry out a precautionary landing at that site. In this case, the site should be an airstrip that is unfamiliar to the candidate.

7.14 Ex.29 – Emergency Procedures/Malfunctions

- (1) If the flight-test aircraft is one with which the examiner is not thoroughly familiar, the Pilot Operating Handbook should be studied before asking the candidate to demonstrate the ability to deal with various simulated emergencies.
- (2) Examiners should use a random sampling system, varying the emergency procedures requested to prevent the examiner's flight test from becoming predictable to candidates, and to ensure all systems and emergency procedures have been covered in training. It is entirely at your discretion, whether this flight test item is tested in the air or on the ground.
- (3) One method of testing an emergency procedure on the ground that many examiners find very effective, and one which you may wish to use when assessing this item, is to assess this item either prior to engine start or upon returning to the apron, just before or after the engine is shut down. If after engine shutdown, the examiner places the throttle, mixture, related switches, and the various ancillary controls in the position where they would normally be in cruise flight for an engine running at cruise power. The examiner will then describe an emergency scenario to the candidate, such as an engine fire or other emergency. The examiner may then make an assessment based on how the candidate actually positions the appropriate controls, switches or valves associated with the drill rather than assessing a rote statement of how things should be done. Utilizing this method should preclude a candidate from receiving a favourable assessment based on the ability to recite an emergency drill when they in fact have no understanding or appreciation of the action the drill requires.
- (4) Two (2) emergencies or malfunctions are required on the RPP(A) flight test.

8.0 PRIVATE PILOT LICENCE – AEROPLANE

- (1) This module supplements the flight test guide and expresses more clearly the intent of each flight test item. It will assist you, the examiner, in conducting a valid and thorough flight test and aid in making accurate assessments of the candidate's skill and knowledge.

8.1 Ex. 2 – Aeroplane Familiarization and Preparation for Flight

- (1) Documents and Airworthiness
 - (a) Ensure that questions asked are relative to the aircraft being used for the flight test. The candidate must be able to determine that the aeroplane's documents are valid, has a maintenance release and has an adequate number of hours remaining for the intended flight before the next maintenance action becomes due.
 - (b) A review of the Aircraft Journey Log should reveal that the basic calendar-driven maintenance items have been completed and are not expired. The candidate should know what action to take in regard to deferred items and unserviceabilities.
- (2) Aeroplane Performance
 - (a) The candidate may use the Pilot Operating Handbook to determine information other than essential performance speeds listed in the flight test guide as memory items. Record the answers given to questions regarding the best angle of climb speed, best rate of climb speed and manoeuvring speed so that during the flight test the actual speeds flown in the appropriate exercises may be compared.
 - (b) Questions relating to the Pilot Operating Handbook should be "operational" questions, particularly if the conditions of temperature, wind strength, etc. existing at the time of flight test can be utilized. It can be helpful to present a scenario at an unknown airport with a higher or lower elevation than the candidate's home base.
 - (c) The recommended climb and approach to landing airspeeds may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in

accordance with CAR Standard 523.63 Climb, General or section 523.73 Reference Landing Approach Speed.

(3) Weight and Balance, Loading

- (a) Make this a practical exercise and relate the weight and balance problem to the proposed cross-country flight (Exercise 23A). The loading assigned should require the candidate to correct a situation where the weight or center of gravity (C of G) is slightly beyond limits and some reduction or rearrangement of the load is required to bring the weight or balance within limits. The candidate will be questioned on extreme C of G locations and their effect on aircraft handling and performance. A weight and balance calculation for the actual flight is also required.

(4) Pre-Flight Inspection

- (a) After the candidate has completed the pre-flight inspection, practical questions relating to the flight test aircraft should be asked. The candidate should be questioned to determine what appropriate action would be taken if an unsatisfactory item were detected during the pre-flight inspection.
- (b) The failure by the candidate to visually confirm that there is sufficient fuel and oil for the actual intended flight is disqualifying and will constitute a failure of the flight test. It is intended that this visual check be an actual check of the tank (or tanks) as opposed to just a check of the fuel gauges. The verification of fuel and oil levels will be performed in accordance with the manufacturer's recommendations in the POH/AFM. If the aircraft design dictates that visual checks are not possible, fuel chits, fuel logs or other credible means, which in your judgment meet the confirmation requirement, will be acceptable.
- (c) The candidate is expected to conduct the oral passenger safety briefing at this time. Should the candidate omit the briefing, you will ask the candidate to provide one. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing.

Note: The candidate is expected to state approximate flight endurance at normal cruising speed with the fuel on board. **“How much flight time do you have with the fuel in the tank(s)?”**

(5) Engine Starting and Run-up, Use of Checklists

- (a) Check to see if the candidate uses the checklist provided in the aircraft. If you do not agree with the content of the checklist, the candidate should not be penalized. This would be an item for you to discuss with the CFI of the training unit and, if necessary, the Issuing Authority responsible for Flight Operations. The checks carried out should cover at least the items mentioned in the applicable POH/AFM. The candidate should be questioned at this time to determine what action would be taken if the checks revealed a problem, (e.g. excessive magneto drop, instruments not indicating a change when mixture or carburetor heat controls, etc. are selected and/or reset). The requirement to ensure correct control surface movements is imbedded in the *Aim* and is a mandatory part of the checks.

Note: A check of flight controls for freedom and correct movement of the corresponding control surfaces is mandatory and will be conducted before flight. Should the candidate neglect this check, the examiner will ask the candidate to perform it and a major error will be noted.

(6) Operation of Aircraft Systems

- (a) This flight test item is evaluated throughout the flight test. The candidate should demonstrate ability to safely operate the various systems installed on the aircraft and will be questioned orally on two (2) items from the list in the flight test guide. The use of mixture control and carburetor heat, if installed, will be evaluated during the flight. The practical use of heating and ventilation controls should be evaluated. It is advisable to complete the oral portion of this flight test item prior to starting the engine.

8.2 Ex. 4 – Taxiing

- (1) If significant wind exists, the candidate is expected to correctly use the controls to minimize the risk of an upset. In calm or light wind conditions, while taxiing, the examiner should ask the candidate to demonstrate control positions under simulated wind strengths and directions. Except when making left and right turns to verify proper functioning of the flight instruments and when other traffic and conditions permit, the candidate is expected to follow the center-line markings on taxiways where available. Should the candidate omit the flight instrument checks, the examiner will ask the candidate to complete these checks prior to the takeoff. This will be assessed as a major error and the final assessment awarded will be dependent upon the effectiveness of the instrument check carried out.

8.3 Ex. 9 – Steep Turn

- (1) Be very clear when specifying altitude, airspeed, angle of bank (45°) and the geographic reference to be used. The examiner will be required to exercise good judgment and care in the selection of the geographic point. It should be narrow, prominent and clearly visible and not of such broad expanse that the aim of the exercise cannot be realistically achieved (e.g. “roll out within 10° of Lake Superior” is not acceptable.). You must ensure that the candidate has the same reference point in mind, in order to avoid confusion when assessing the recovery.

8.4 Ex. 11 – Slow Flight (Flight near Minimum Controllable Airspeed)

- (1) Flight Instructors must impress upon the students that when a stall warning activates at lower altitudes, immediate action must be undertaken to resume safe flight by providing a safe margin above the stall speed.
- (2) The objective of flight near minimum controllable airspeed, at a safe altitude, is to assess the candidate’s competency to sense the decrease in wing performance resulting from operations at high angles of attack, identify a condition that could lead to an imminent stall, and to control the aeroplane while avoiding a stall.
- (3) Flight near minimum controllable airspeed with the stall warning intermittently activated or with buffeting while maintaining control and altitude presents the best situation for identifying slow flight (“Slow Flight” is defined as the range of speeds between the airspeed for maximum endurance and a speed immediately above the stalling speed with full power. It is also known as flight on the back-side of the power curve, requiring more power to go slower).
- (4) The use of power and a reduced weight will lower the actual stall speed below the stall speed quoted by the POH, allowing a margin for safety. A small increase in airspeed while turning or in turbulence is acceptable as the stall speed increases in these conditions. Good heading control and a recovery to straight and level flight is expected. Avoid prolonged periods in slow flight to prevent possible overheating of some engine components.
- (5) The PPL candidate will be asked to execute a gentle turn with 15 degrees of bank while in flight near minimum controllable airspeed. Refer to the definition for “flight near minimum controllable airspeed” on Page 12 of this document.

8.5 Ex. 12 – Stall

- (1) Two (2) stalls are called for on the PPL flight test. A power-off or arrival stall and a power-on or departure stall.
- (2) The stall may be entered from various flight conditions, e.g. slow flight, a cross-control stall, a climbing turn, a steep turn or a simulated overshoot (with full-power) from a full flap approach in a landing configuration. During power-on stalls, some wing drop is acceptable but adequate control of yaw with rudder is mandatory. Negative G loading and excessive nose-down pitch attitudes during the recovery

are unacceptable. To avoid being predictable and to ensure comprehensive training of this exercise, it is recommended that the requested stall differ from candidate to candidate.

- (3) Recovery from the stall must be completed at the height recommended by the manufacturer or no less than 2,000 feet above ground level whichever is the greater.

Note: Attempts to control wing drop and yaw by using **abrupt and full** opposite aileron control are disqualifying.

8.6 Ex. 14 – Spiral

- (1) Before initiating the spiral dive, the examiner should not indicate or state the manoeuvre that is about to be assessed, but simply advise the candidate to return the aircraft to straight and level flight on the command, "You have control". Recovery should be completed at the minimum height specified by the manufacturer, or no less than 2,000 feet above ground, whichever is the greater.
- (2) Care must be exercised during the demonstration of this flight test item to ensure that the aircraft is not allowed to exceed airspeed or flight load factor limitations. Entry to this manoeuvre from slow cruise, climbing turns, or from turns during slow flight will provide a greater margin for safety. Ensure that flaps are retracted.

8.7 Ex. 15 – Slipping

- (1) Should the candidate not demonstrate slipping during some phase of the test, you will request that the candidate demonstrate the use of a forward slip or a slipping turn to increase the rate of descent without any significant increase in airspeed. You should vary your request from candidate to candidate to confirm the status and extent of training actually being given by the FTU.
- (2) A forward slip out-of-wind during an approach to land in significant crosswind conditions is indicative of poor technique.

Note: Any **significant** skidding manoeuvre is disqualifying.

8.8 Ex. 16 – Takeoff

- (1) It is recommended that you use a take-off scenario that requires the candidate to decide what procedure to use. When testing a takeoff other than a normal takeoff, ensure that the simulated runway length and surface conditions of your scenario are clear to the candidate. For example, if you wish to see a soft-field takeoff, be certain that the simulated conditions that you specify for the surface clearly lead the candidate to conclude that a soft-field technique is necessary.
- (2) While it may not always be possible to assess the candidate's ability to compensate for a crosswind, every effort should be made to assess this. Request a runway other than the one in use or use a nearby airport where a crosswind condition does exist.
- (3) Aircraft configurations and airspeeds utilized should be those specified in the POH/AFM, taking into consideration existing conditions. The recommended climb speeds may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with Chapter 523 section 523.63 of the CARs Climb, General. Soft-field takeoff technique should be as recommended in the POH/AFM or as recommended in the Flight Training Manual (Page 92) – Takeoffs from Soft or Rough Surfaces.
- (4) Prior to the takeoff, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, take-off considerations and procedures to be used in the event of an actual engine failure during the takeoff and initial climb. The crew briefing is not part of the take-off evaluation but is essential to safety in the event of an actual emergency.

8.9 Ex. 17 – Circuit

- (1) This exercise will be assessed throughout the flight test and a mark awarded only after the final landing. This will ensure that the candidate is assessed on the departure and entry procedures as well as a complete circuit after a takeoff leading to a landing. If the test is conducted from an uncontrolled airport the candidates should be questioned, or given simulated ATC clearances and instructions to assess their knowledge. If the test is conducted from a controlled airport, question the candidate's knowledge of circuit procedures for uncontrolled airports. If possible, it is recommended that both controlled and uncontrolled airports be used during the test, if they are conveniently available.

8.10 Ex. 18 – Approach and Landing

- (1) As indicated in Exercise 16, ensure that any simulated conditions clearly indicate to the candidate the type of landing expected.
- (2) Make every effort possible to utilize a runway where a crosswind exists for one landing in order to assess the candidate's ability in these conditions. If you are at a busy airport, it may be possible to go to a nearby airport to carry out a crosswind landing.
- (3) Although full-flap landings are expected, a crosswind component of 75% or greater of the maximum demonstrated crosswind figure would justify using less than full-flap extension, depending on the suitability of the landing surface. Rough or soft-field surfaces may still warrant full-flap extension.
- (4) The recommended approach to landing airspeed may be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with Chapter 523 section 523.73 of the CARs Reference Landing Approach Speed. Soft-field landing technique should be as recommended in the POH/AFM or the Flight Training Manual (Page 109) Soft and Unprepared Field Landings. Further information is available for "Operations on Runways with Unpaved Surfaces" by referring to: <http://www.tc.gc.ca/eng/civilaviation/opssvs/management-services-referencecentre-acsc-700-700-011-1481.htm>.
- (5) The candidate should maintain an approach profile that will result in airspeed of 1.3 V_{so}, or the minimum safe speed for existing conditions, when going through the "approach window" at 50 feet above the runway threshold. Faster speeds are acceptable on base leg and long final but should be gradually decreasing with greater flap extension until the desired speed at 50 feet is reached.
- (6) If the wind conditions dictate greater threshold-crossing speeds or thermal lift is encountered over the runway, some aeroplane types may exhibit a tendency to float in ground effect. Because there is no opportunity to correct for deviations beyond the specified tolerances in these cases, the candidate should not be assessed as a "1" for exceeding the touchdown distance tolerance in the criteria, but should only be assessed a "2" if correct and timely approach and landing techniques were used, along with a supporting remark stating the facts of what happened. More than doubling the specified tolerance value due to pilot error or poor technique is disqualifying.
- (7) In assessing the candidate's ability to land at a pre-determined touchdown point it is not intended that examiners turn this item into a spot landing exercise, rather to evaluate the candidate's ability to land within a specified portion of the runway with a predictable degree of accuracy. The main aim of the item is to determine that correct procedures and techniques are used in addition to achieving some accuracy.
- (8) Should the candidate realize that a short-field landing within the distance tolerance from the specified touchdown point cannot be achieved, one overshoot for a second attempt, initiated prior to commencing the flare, is acceptable. Rough technique and hard landings in an attempt to "plant" the aeroplane into the touchdown zone are unacceptable.
- (9) "Touch and go" landings are not to be used for evaluating the candidate's performance of the required takeoffs and landings.

- (10) The overshoot may be assessed in conjunction with this item, or called for and assessed from any of the landing approaches, the forced landing approach, or the precautionary landing approach.

8.11 Ex. 21 – Precautionary Landing

- (1) Be specific when outlining any simulated conditions that require a precautionary landing. If the scenario is based on weather conditions, then these conditions (i.e. ceiling, visibility, etc.) and their trends should be specified and remain constant during the procedure.
- (2) The aim of the item is to carry out the procedures for a safe landing in a suitable area. Provided that the procedure used is organized, logical and the aircraft configuration is as recommended in the POH/AFM, you should not be adversely influenced by a procedure that varies from your preference. When a suitable aerodrome is available, candidates should be asked to demonstrate a short or soft-field landing and takeoff (Exercise 18 & 16) in order to evaluate them on this item, along with the precautionary approach.
- (3) A best practice would be one in which the candidate configures and trims the aeroplane for the low-level inspection while in straight and level flight, such as on the downwind leg. After configuring and trimming for level flight at the recommended airspeed, the candidate needs only reduce the power, without re-trimming, for the descent on the base and final legs and then level off at the desired inspection height by returning the power to the setting used when the aeroplane was trimmed in level flight. By using this technique, a stable low-level over-flight will be much more easily achieved.
- (4) Should the inspected site not be suitable to complete a landing, you should let the candidate know that you will request a demonstration of the type of landing that would have been appropriate, on return to base.
- (5) Where the precautionary landing procedure is carried out at an airport, it is mandatory for the candidate to respect accepted circuit-joining procedures. Refer: section 602.96 of the CARs and A.I.M. RAC 4.0 – Airport Operations.

8.12 Ex. 22 – Forced Landing

- (1) The forced landing item is not only about gliding to a point, it is also about managing an emergency situation, making correct decisions and following prescribed procedures that lead to a successful approach and landing.
- (2) The engine failure will be simulated in accordance with the method recommended by the manufacturer. When possible, the examiner should simulate an engine failure from approximately 3,000 feet AGL by closing the throttle with no advanced warning. However, you should ensure that some suitable landing areas are available within the field of vision of the candidate and within gliding range of the aircraft. In all cases, advise the candidates of the emergency by stating “simulated engine failure”.
- (3) Provided the aim of the exercise is accomplished in an organized manner, you should not be adversely influenced if the procedure used varies from your own preferred procedure. The candidate is expected to establish the aeroplane in a glide at the recommended airspeed, but is permitted to then increase that speed, as required, without exceeding any airframe limitations (i.e. V_{FE}), to permit a successful and safe approach towards a touchdown zone in the first 1/3 of a suitable landing area. An approach that would have touched down more than 1000 feet beyond the touchdown zone will be evaluated as a 2 or less.
- (4) As this is a simulated procedure, the candidate will be expected to demonstrate good airmanship by clearing the engine at appropriate intervals during the descent. In significantly cold conditions, the practice of leaving some power on and achieving a normal descent angle and airspeed by using flap is acceptable. You should determine how the candidate plans to execute this item during the pre-flight briefing.
- (5) Occasionally a candidate will, after commencing the forced landing, indicate a preference for another landing area. Normally a change of intended landing area during the approach is not acceptable, as one of the main competencies the examiner is required to assess during this exercise is the candidate's ability

to fly an approach to a pre-selected landing area. A change of field is only acceptable from an altitude or point in the approach from which a landing could still have been made on the original landing site. Such a change would be acceptable if upon reaching the lower altitude, the candidate observed an obstruction on approach or that field surface conditions were not suitable and such conditions were not apparent when the approach as commenced, but another suitable or obstruction free area is selected.

- (6) You will evaluate the candidate's ability to safely handle this emergency through 2 separate flight test items, namely 22A.Control/Approach, where you assess the actual hands-on flying skills and the ability to "Make the Field". In 22B.Cockpit Management, the candidate must demonstrate good airmanship, manage the cockpit and complete basic safety checks.

8.13 Ex. 23 – Pilot Navigation

(1) Pre-flight Planning Procedures

- (a) Assign a cross-country route that will promote decision-making. For example, choose a destination that is beyond the fuel range of the aeroplane, with a loading scenario that does not permit full fuel tanks, or one where fuel is not available at the destination for the return flight. When assigning the cross-country routing, examiners should try to select a destination that will provide the candidate with suitable terrain, sufficient enroute checkpoints and enroute fuel stops. Avoid using a route that would parallel a major roadway, waterway or shoreline.
- (b) Unless the candidate encounters delays in obtaining weather or other necessary information, preparation, excluding weight and balance computations for the actual flight, should be completed within 45 minutes.
- (c) If the cross-country flight is assigned in advance, the candidate may make preliminary preparations only such as initial route selection, map preparation, determination of headings, and selection of possible alternates and initial navigation flight log entries prior to the flight test. In this case, on the day of the flight test, the candidate will, after obtaining weather information, complete all final preparations including weight and balance computations for the actual flight within 45 minutes. The candidate's completed calculations will be verified for accuracy.
- (d) Under normal circumstances, if the candidate requires more than double the allotted time period for preparation, the candidate's performance would be deemed to be unacceptable.
- (e) The candidate should not be penalized if he/she chooses not to draw 10° drift lines on the chart. (The enroute performance evaluated by 23C will indicate whether the candidate can do without them or not.)

(2) Departure Procedures

- (a) Candidates are not restricted to just one method of departure. They have the option of determining the most efficient and practical departure procedure to use for the given departure location.
- (b) Assessment will be based on the candidate's demonstrated ability to carry out the pre-selected departure procedure. If, due to operational requirements, such as vectors from ATC, that are beyond the control of the candidate, the candidate is unable to fly the pre-determined departure procedure, assessment should be based on his/her ability to adapt to the new circumstances and deal with the unforeseen situation.
- (c) The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading and dead-reckoning.

(3) En Route Procedure

- (a) The candidate is expected to give you an estimated time of arrival (ETA) for the destination or first turning point upon achieving level flight and setting heading for the enroute portion. Where a routing has very few landmarks, additional time may be allowed for the candidate to determine if

there is a track error. A better choice of routing, where available, would help prevent the need for additional time.

- (b) The candidate is expected to make sufficient in-flight entries to assist with position estimating, ground speed checks and ETAs at various check points on the navigation flight log.
- (c) A groundspeed check using the time and distance travelled to a checkpoint or landmark is expected to confirm or revise the ETA. Where it is evident that the aircraft has deviated from the intended course with reference to a landmark, the candidate is expected to make a heading correction to regain course.
- (d) The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading.

(4) Diversion to an Alternate

- (a) When you ask for a diversion after a series of other flight test manoeuvres, you may be of assistance in determining exact location and orientation and allow enough time for the candidate to arrange the chart. Only then should you request the diversion.
- (b) The candidate is expected to initiate the diversion without undue delay. This requires extensive ground training and practice to improve the candidate's ability to quickly determine a track to follow, an approximate heading and an approximate time enroute without the need to loiter in a holding pattern.
- (c) The examiner will specify an initial altitude to fly. When practicable, a part or all of the diversion should be conducted at a height between 500 and 1000 feet above ground or at a minimum safe altitude, whichever is higher. The candidate is expected to maintain declared altitudes within ± 200 feet; however the candidate may change altitudes to suit the topography or the scenario and is expected to communicate intentional altitude changes to the examiner.
- (d) Estimated enroute and arrival times may be approximate but should have a reasonable degree of accuracy. With respect to the estimated time of arrival and the actual time of arrival at the alternate, no hard numbers have been established in the criteria. Examiners may accept an estimated time of arrival for this item that is reasonable and would indicate that the diversion could be conducted as planned. The examiner will assess the PPL candidate's ability to proceed toward an alternate destination by using dead-reckoning or by following geographic features such as roads, railways or rivers, where they are available.
- (e) When it is feasible to test the diversion at low level, the examiner must consider the following:
 - (i) regulations, built up areas etc.;
 - (ii) safety considerations;
 - (iii) suitability of the area, terrain elevation, altitude and obstructions;
 - (iv) annoyance to persons or livestock.
- (f) Do not set up the candidate for a possible contravention of the regulations. The selected destination should not require the candidate to over-fly populated areas.
- (g) Rulers, notched pencils, protractors and computers will not be used for this procedure. The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading. Once Ex. 23 has been completed and assessed, electronic aids may be used for the return to base.

8.14 Ex. 24 – Instrument Flying

- (1) You must take extra care in the evaluation of these flight test items. A review of the flight test guides is recommended to make sure the differences between Private and Commercial candidates are clear to you and that the requested demonstrations are in fact appropriate to the licence being sought.

- (2) Both the flight test guide and flight test report place Exercise 24 - Instrument Flying as nearly the last flight test item. This is not intended to give you the impression that instrument flying must come at the conclusion of the test. Examiners who have completed this item right after the enroute portion of the navigation item have indicated better results, due to the candidate being comparatively more alert and better able to concentrate on instrument flying. The possible effect on the instruments from such items as spinning and spiral dives is another reason why many examiners complete these items early in the flight test.
- (3) 24A. - Full Panel
 - (a) After donning a view-limiting device, the candidate should be allowed enough time to settle down in straight and level flight, before asking for any specific manoeuvres. The aeroplane does not require a complete panel of flight instruments for the private pilot flight test. This item may be completed with the available flight instruments installed in the aeroplane.
- (4) 24C. - Recovery from Unusual Attitudes
 - (a) Only one unusual attitude recovery is required for the private pilot licence skill test and is performed using available flight instruments.
 - (b) You should vary the type of unusual attitude that you request from candidate to candidate, e.g. nose up or down attitudes, with or without bank, etc. This samples each area of training and confirms that in fact the training is being conducted.
 - (c) When assessing recoveries from unusual attitudes, you should place the aircraft in the desired attitude and then give control to the candidate stating loudly and clearly "You have control". The aircraft should not be allowed to approach limiting airspeeds before giving control to the candidate. All unusual attitude recoveries should be completed at a height recommended by the manufacturer, or no less than 2,000 feet above ground, whichever is the greater.

8.15 Ex. 29 – Emergency Procedures/Malfunctions

- (1) If you are not thoroughly familiar with the flight test aircraft, study the Pilot Operating Handbook before asking the candidate to demonstrate the ability to deal with various simulated emergencies or malfunctions.
- (2) It is not intended that all possible emergency procedures be assessed with each and every candidate. You will request two (2) emergency procedures in the testing of this item. It is entirely at your discretion, whether the flight-test items are tested in the air or on the ground. However, when safety of the aircraft is not affected, an attempt should be made to assess the candidate's ability to perform emergency procedures under realistic conditions.
- (3) You are expected to use a random sampling system, varying the emergency procedures requested, to prevent 'your' flight test from becoming known to the candidates and to ensure all systems and emergency procedures have been covered in training. Do not compound unrelated emergencies.
- (4) One method used by several examiners that is recommended for some of the emergencies is to evaluate them before engine start or after engine shutdown. The examiner places all ancillary control as they would be in cruise flight then presents a scenario, such as an "Engine Fire in Flight" or any other emergency listed in the POH/AFM. The candidate is expected to carry out the emergency procedure by actually moving the controls in the correct sequence. Your evaluation of the candidate actually performing the drill is more valid than having the candidate just recite a procedure from memory.

8.16 Ex. 30 – Radio Communications

- (1) The demonstration of correct radio procedures throughout the whole flight requires you to assess this item when the flight has been completed.

- (2) Assessment is to be based upon the candidate's ability to use proper radio procedures, respond to and follow ATC clearances and instructions, to obtain weather information and to communicate flight plan changes and updates. Where necessary, this flight test item can be simulated, when the flight test is not conducted near an ATC facility. If required, you can assess elements of this item on the ground. The use of practical scenarios is an excellent method to let the candidate decide which radio communication services to use.

9.0 COMMERCIAL PILOT LICENCE – AEROPLANE

- (1) This section supplements the flight test guide and expresses more clearly the intent of each flight test item. It will assist you, the examiner, in conducting a valid and thorough flight test and aid in making accurate assessments of the candidate's skill and knowledge.

9.1 Ex. 2 – Aeroplane Familiarization and Preparation for Flight

- (1) Documents and Airworthiness
- (a) The candidate must be able to determine that the aeroplane's documents are valid and that an adequate number of hours are remaining for the intended flight before the next maintenance action becomes due. A review of the Aircraft Journey Log should reveal that the basic calendar-driven maintenance items have been completed and are not expired. The candidate should know what action to take in regard to deferred items and unserviceabilities. Emphasize the maintenance release conditions and deferred defects. Ensure that questions asked are relative to the aircraft being used for the flight test.
 - (b) Suggest a scenario outlining a defect discovered during a pre-flight inspection or during the flight and ask the candidate to write down the defect in a mock journey log. Following the entry in the mock journey log, ask questions about the impact of that discovery for the proposed flight.

Note: A mock journey log may be created by downloading a Temporary Aircraft Journey Log form (26-0603) from the following site: <http://www.apps.tc.gc.ca/Corp-Serv-Gen/5/Forms-Formulaires/searchrs.aspx?keywords=&FormNumber=26-0603&category=All&stat=&btnSubmit=Submit>

- (2) Aeroplane Performance
- (a) The candidate may use the Pilot Operating Handbook to determine information other than essential performance speeds listed in the flight test guide as memory items.
 - (b) Record the answers given to questions regarding the best angle of climb speed, best rate of climb speed and manoeuvring speed. Questions relating to the Pilot Operating Handbook should be "operational" questions, particularly if the conditions of temperature, wind strength, etc. existing at the time of flight test can be utilized.
 - (c) The recommended approach to landing airspeed should be corrected for the predicted landing weight as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with section 523.73 of the CARs Reference Landing Approach Speed. The calculation of the reference airspeed of $1.3 V_{SO} \text{ KIAS (} V_{REF} \text{)}$ for the predicted landing weight will determine the target speed at 50 feet above the runway threshold to be used for the soft-field or short-field landings.
- (3) Weight and Balance, Loading
- (a) Make this a practical exercise and relate the weight and balance problem to the proposed cross-country flight (Exercise 23A). The loading assigned should require the candidate to correct a situation where the weight or center of gravity (C of G) is slightly beyond limits and some rearrangement of the load is required to bring the weight or balance within limits. The candidate will be questioned on extreme C of G locations and their effect on aircraft handling and performance. A weight and balance calculation for the actual test flight is also required.

(4) Pre-Flight Inspection

- (a) After the candidate has completed the pre-flight inspection, practical questions relating to the flight test aircraft should be asked. The candidate should be questioned to determine what appropriate action would be taken if an unsatisfactory item were detected during the pre-flight inspection. The verification of fuel and oil levels will be performed in accordance with the manufacturer's recommendations in the POH/AFM. The failure by the candidate to visually confirm that there is sufficient fuel and oil for the actual intended flight is disqualifying (safety issue) and will constitute a failure of the flight test. It is intended that this visual check be an actual check of the tank (or tanks) as opposed to just a check of the fuel gauges.
- (b) If the aircraft design dictates that visual checks are not possible, fuel chits, fuel logs or other credible means will be acceptable, if in your judgment they meet the confirmation requirement.
- (c) The candidate is expected to conduct the oral passenger safety briefing at this time. Should the candidate omit the briefing, you will ask the candidate to provide one. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing.

Note: The candidate is expected to state the approximate flight endurance at normal cruising speed with the fuel on board. "How much flight time with the fuel in the tank(s)?"

(5) Engine Starting and Run-up, Use of Checklists

- (a) Check to see if the candidate uses the checklist provided for the aircraft. If you do not agree with the content of the checklist, the candidate should not be penalized. This would be an item for you to discuss with the CFI of the training unit and, if necessary, the Issuing Authority responsible for Flight Operations. The checks carried out should cover at least the items mentioned in the applicable POH/AFM.
- (b) The candidate should be questioned to determine what action would be taken if the checks revealed a problem, (e.g. excessive magneto drop, instruments not indicating a change when mixture or carburetor heat controls are selected and/or reset).

Note: A check of flight controls for freedom and correct movement of the corresponding control surfaces is **mandatory** and will be conducted before flight. Should the candidate neglect this check, the examiner will ask the candidate to perform it and a major error will be noted.

(6) Operation of Aircraft Systems

- (a) This flight test item is evaluated throughout the flight test. The candidate should demonstrate ability to safely operate the various systems installed on the aircraft and will be questioned orally on three (3) items from the list in the flight test guide. The use of mixture control and carburetor heat, if installed, will be evaluated during the flight. The practical use of heating and ventilation controls should also be evaluated. It is advisable to complete the oral portion of this flight test item prior to starting the engine.

9.2 Ex. 4 – Taxiing

- (1) If significant wind exists, the candidate is expected to correctly use the controls to minimize the risk of an upset. In calm or light wind conditions, while taxiing, ask the candidate to demonstrate control positions under simulated wind strengths and directions. Except when making left and right turns to verify proper functioning of the flight instruments and when other traffic and conditions permit, the candidate is expected to follow the centerline markings on taxiways where available.
- (2) Should the candidate omit the flight instrument checks, the examiner will ask the candidate to complete these checks prior to the takeoff. This will be assessed as a major error and the final assessment awarded will be dependent upon the effectiveness of the instrument check carried out.

9.3 Ex. 9 – Steep Turn

- (1) You will ask the candidate to execute a steep turn through 180°, with an angle of bank of 45°, then without pause, reverse the turn to roll out on the original heading. Prior to entering the turn, you will specify the airspeed, selected altitude and the initial heading to be used for this flight test item. A good division of attention between outside references and instrument indications is expected.

9.4 Ex. 11 – Slow Flight

- (1) Flight Instructors must impress upon the students that when a stall warning activates at lower altitudes, immediate action must be undertaken to resume safe flight by providing a safe margin above the stall speed.
- (2) The objective of flight near minimum controllable airspeed, at a safe altitude, is to assess the candidate's competency to sense the decrease in wing performance resulting from operations at high angles of attack, identify a condition that could lead to an imminent stall, and to control the aeroplane while avoiding a stall.
- (3) Flight near minimum controllable airspeed with the stall warning intermittently activated or with buffeting while maintaining control and altitude presents the best situation for identifying slow flight ("Slow Flight" is defined as the range of speeds between the airspeed for maximum endurance and a speed immediately above the stalling speed with full power. It is also known as flight on the back-side of the power curve, requiring more power to go slower.)
- (4) The use of power and a reduced weight will lower the actual stall speed below the stall speed quoted by the POH, allowing a margin for safety. A small increase in airspeed while turning or in turbulence is acceptable as the stall speed increases in these conditions. Good heading control and a recovery to straight and level flight is expected. Avoid prolonged periods in slow flight to prevent possible overheating of some engine components.
- (5) The CPL candidate will be asked to perform a medium turn with 30 degrees of bank while in flight near minimum controllable airspeed. Refer to the definition for "flight near minimum controllable airspeed" on Page 12 at the beginning of this document.

9.5 Ex. 12 – Stall

- (1) The stall may be entered from various flight conditions, e.g. slow flight, a cross-control stall, a climbing turn, a steep turn or a simulated overshoot (with full power) from a full flap approach in a landing configuration. During power-on stalls, some wing drop is acceptable but adequate control of yaw with rudder is mandatory. Negative-G loading and excessive nose-down pitch attitudes during the recovery are unacceptable. To avoid being predictable and to ensure comprehensive training of this exercise, it is recommended that the requested stall differ from candidate to candidate.
- (2) Recovery from the stall must be completed at the height recommended by the manufacturer or no less than 2,000 feet above ground level whichever is the greater.

Note: All attempts to control wing drop and yaw by using **abrupt and full** opposite aileron control are disqualifying.

9.6 Ex. 13 – Spinning

- (1) The incipient spin may be entered from an aggravated or cross-controlled stall that results in a rotation of at least ¼ turn or more by using spin entry technique as recommended in the aircraft's POH or POH Supplement.
- (2) It is important for flight test standardization that this flight test item be conducted in the following manner:

- (a) The candidate must be advised that recovery action is to commence upon command. Give the command to recover after at least $\frac{1}{4}$ turn of rotation has been completed.
 - (b) Recoveries that result in airspeeds exceeding normal operating airspeeds (Green Arc, V_{NO}), but below V_{NE} , are indicative of poor technique and are to be considered as major errors. Exceeding V_{NE} is disqualifying and will terminate the flight test as the aeroplane requires a special inspection to determine continuing airworthiness.
- (5) It is essential that you confirm that the aircraft being used for the test is certified for intentional spinning, that the weight and balance are within the utility-category envelope. Ensure that the candidate understands the spin recovery procedure, through questioning.
- (6) Many of the new POH/AFMs indicate a height loss figure for a properly executed spin and recovery. Well-qualified people established these figures and examiners should be aware of this information. Where specified, the examiner may use this figure as a guide in determining a safe entry altitude and what could be considered excessive altitude loss.
- (7) Despite the use of correct entry technique and maintaining full pro-spin control application, certain aeroplane types may nevertheless enter a spiral dive. If this occurs, the candidate is expected to announce "Spiral Dive" and use the correct spiral-dive recovery technique. The manoeuvre does not have to be repeated.

9.7 Ex. 15 – Slipping

- (1) During the normal course of a flight test, there may be a number of opportunities to assess the slipping manoeuvre, such as during a forced landing approach or one of the approaches to landing.
- (2) Should the candidate not demonstrate the sideslip during some phase of the test, you will request that the candidate demonstrate the use of a forward slip or a slipping turn to increase the rate of descent without any significant increase in airspeed. You should vary your request from candidate to candidate to confirm the status and extent of training actually being given by the FTUs.
- (3) A forward slip out-of-wind during an approach to land in significant crosswind conditions is indicative of poor technique.

Note: Any **significant** skidding manoeuvre is unacceptable. (Critical Error)

9.8 Ex. 16 – Takeoff

- (1) Both a soft-field takeoff and a short-field takeoff with an obstacle are to be tested. It is recommended that you use a take-off scenario that requires the candidate to decide what procedure to use. Ensure that the simulated runway length and surface conditions of your scenario are clear to the candidate. If the runway is actually short and/or soft, with or without an obstacle, ensure that you both agree on the prevailing conditions. Soft-field takeoff technique should be as recommended in the POH/AFM or as recommended in the Flight Training Manual (Page 92) – Takeoffs from Soft or Rough Surfaces.
- (2) Remember that most short runways used by light aeroplanes are sod or gravel unpaved surfaces and often have obstacles to clear. Should you be testing on the "real thing", confirm that the candidate clearly understands the aircraft's capabilities to ensure a safe departure.
- (3) While it may not always be possible to assess the candidate's ability to compensate for a crosswind, an effort should be made to assess it. Request a runway other than the one in use or use a nearby airport where a crosswind condition does exist.
- (4) Aircraft configurations and airspeeds utilized should be those specified in the POH for actual weights, taking into consideration existing conditions. The recommended climb speeds should be corrected for actual weights as depicted in available POH/AFM performance charts or tables or, in their absence, in accordance with Chapter 523 section 523.63 of the CARs Climb, General.

- (5) Prior to the takeoff, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, takeoff considerations and procedures to be used in the event of an actual engine failure during the takeoff and initial climb. The examiner may question or supplement the briefing as required to ensure the highest possible level of safety in the event of an actual emergency.
- (6) The crew briefing is not part of the take-off evaluation but is essential for safety in the event of an actual emergency.

9.9 Ex. 17 – Circuit

- (1) This item will be assessed throughout the flight test and a mark awarded only after the final landing. This will ensure that the candidate is assessed on the departure and entry procedures as well as a complete circuit after a takeoff leading to a landing. If the test is conducted from an uncontrolled airport the candidates should be questioned, or given simulated ATC clearances and instructions to assess their knowledge. If the test is conducted from a controlled airport, question the candidate's knowledge of circuit procedures for uncontrolled airports. It is recommended that both controlled and uncontrolled airports be used during the test, if they are conveniently available.

9.10 Ex. 18 – Approach and Landing

- (1) As indicated in Item 16, ensure that any simulated conditions are clearly indicated to the candidate.
- (2) Make an effort to utilize a runway where a crosswind condition exists in order to assess the candidate's skill in this area. If you are at a busy airport, it may be possible to go to a nearby airport to carry out crosswind landings or the power-off 180° accuracy approach and landing.
- (3) Although full-flap landings are expected, a crosswind component of 75% or greater of the maximum demonstrated crosswind figure would justify using less than full-flap extension, depending on the suitability of the landing surface. Rough or soft-field surfaces may still warrant full-flap extension.
- (4) Ex. 18A, the power-off 180° accuracy approach and landing is not an emergency exercise, but a manoeuvre that measures skill in precision flying. The power-off 180° accuracy approach and landing will be initiated from normal circuit height or at the height assigned by ATC. The candidate is expected to close the throttle and initiate the glide on the downwind leg abeam the specified touchdown point. **If traffic or ATC does not permit initiation abeam the touchdown point**, the gliding descent from circuit height may be delayed until later in the circuit. The candidate will establish a gliding approach from circuit height that will result in a landing with a degree of accuracy. One engine clearing is allowed before descending through 500 feet AGL. In very cold weather conditions, the practice of leaving some power on and achieving a normal gliding descent angle and airspeed by using flap is acceptable, but no further engine clearing should be allowed. If it is so cold that further clearing is still required, perhaps the conditions are not conducive or appropriate for flight testing.
- (5) Faster speeds are acceptable on base leg and long final but should gradually be decreased with greater flap extension until the desired speed at 50 feet AGL is reached. It is not expected that $1.3 V_{SO}$ (V_{REF}) be held from 1 or 2 miles final in a light aeroplane. For the short or soft-field landings, the approach profile should result in airspeed of $1.3 V_{SO}$, when going through the "approach window" at 50 feet above the runway threshold.
- (6) The final approach airspeed is expected to be corrected for the predicted landing weight as depicted in available POH/AFM performance charts or tables or a minimum safe speed for existing conditions. In the absence of charts or tables, reference should be made to 523.73 of the CARs Reference Landing Approach Speed.
- (7) If the wind conditions dictate speeds greater than $1.3 V_{SO}$ (adjusted for weight) or thermal lift is encountered over the runway, some aeroplane types may exhibit a tendency to float in ground effect.

- (8) Because there is no opportunity to correct the deviation in these cases, the candidate should not be assessed as a “1” for exceeding the touchdown distance tolerance in the criteria, but should *only be* assessed a “2” **on condition that correct and timely approach and landing techniques were used**, along with a supporting remark stating the facts of what happened. More than doubling the specified value due to pilot error or poor technique is disqualifying.
- (9) In assessing the candidate's skill to land at a pre-determined touchdown point it is not intended that examiners turn this item into a spot landing exercise. The main objective of the item is to determine that correct procedures and techniques are used in addition to achieving some accuracy.
- (10) For the short-field landing, should the candidate realize that the specified touchdown point cannot be achieved within the distance tolerance; an overshoot for a second attempt, initiated prior to commencing the flare, is acceptable. Rough technique and hard landings in an attempt to “plant” the aeroplane into the touchdown zone are unacceptable.
- (11) Soft-field landing technique should be as recommended in the POH/AFM or the Flight Training Manual (Page 109) Soft and Unprepared Field Landings. Further information is available for “Operations on Runways with Unpaved Surfaces” by referring to:
<http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acsc-700-700-011-1481.htm>
- (12) “Touch and go” landings are not to be used for evaluating the candidate’s performance of the required landings and takeoffs.
- (13) The overshoot (18C) should not be requested in conjunction with the power-off 180° accuracy approach and landing, unless required to maintain safety of flight, but should be assessed from the forced landing approach, the precautionary landing approach or from a balked landing.

9.11 Ex. 21 – Precautionary Landing

- (1) It is expected that a CPL candidate will conduct this item in an efficient, effective and timely manner and apply good judgment as to the suitability of the landing area selected for inspection.
- (2) Be specific when outlining any simulated realistic conditions that require a precautionary landing. There are many varied reasons to conduct a precautionary landing, but if the scenario is based on weather conditions, then these conditions (i.e. ceiling, visibility, etc.) and their trends should be specified and remain constant during the procedure.
- (3) The aim of the item is to carry out a procedure to ascertain that a landing surface is suitable for a safe landing and a subsequent departure. Provided that the procedure used is organized, logical and the aircraft configuration is as recommended in the Pilot Operating Handbook, you should not be adversely influenced by a procedure that varies from your own. When a suitable aerodrome is available, candidates should be asked to demonstrate a short or soft field landing (Exercise 18) in order to evaluate them on this item, along with the precautionary landing procedure.
- (4) A best practice would be one in which the candidate configures and trims the aeroplane for the low-level inspection while in straight and level flight, such as on the downwind leg. After configuring and trimming for level flight at the recommended airspeed, the candidate needs only to reduce power, without re-trimming, for the descent on the base and final legs and then level off at the desired inspection height by returning the power to the setting used when the aeroplane was trimmed in level flight. By using this technique, a stable over-flight will be much more easily achieved.
- (5) Should the inspected site not be suitable to complete a landing, you should let the candidate know that you will request a demonstration of the type of landing that would have been appropriate, on return to the base airport.
- (6) Where the precautionary landing procedure is carried out at an airport, it is mandatory for the candidate to respect accepted circuit procedures. Refer to section 602.96 of the CARs and A.I.M. RAC 4.0 – Airport Operations.

9.12 Ex. 22 – Forced Landing

- (1) The forced landing item is not only about gliding to a point, it is also about managing an emergency situation, making correct decisions and following prescribed procedures that lead to a successful approach and landing.
- (2) You will evaluate the candidate's ability to safely handle this emergency through 2 separate flight test items, namely **22A.Control/Approach**, where you assess the actual hands-on flying skills and the ability to "Make the Field". In **22B.Cockpit Management**, the candidate must demonstrate good airmanship and complete basic safety checks.
- (3) The examiner will normally simulate the engine failure by closing the throttle to the idle position or by bringing the power lever to flight idle, as applicable and clearly stating "simulated engine failure".
- (4) Whenever possible, engine failure should be simulated from approx. 3,000 feet AGL with no advanced warning. However, you should ensure that some suitable landing areas are available within the field of vision of the candidate and within gliding range of the aircraft. Provided the aim of the exercise is accomplished in an organized manner, the examiner should not be adversely influenced if the procedure used varies from your own preferred procedure.
- (5) The candidate is expected to establish the aeroplane in a glide at the recommended airspeed, but is permitted to then increase that speed, as required, without exceeding any airframe limitations (i.e. V_{FE}), to permit a successful and safe approach towards a touchdown zone in the first 1/3 of a suitable landing area. An approach that would have touched down more than 1000 feet beyond the touchdown zone will be evaluated as a 2 or less.
- (6) The candidate will be expected to demonstrate good airmanship by clearing the engine at appropriate intervals during the descent. In very cold conditions, the practice of leaving some power on and achieving a normal descent angle and airspeed by using flap is acceptable. You should determine how the candidate plans to execute this item during the pre-flight briefing.
- (7) Occasionally a candidate will, after commencing the forced landing, indicate a preference for another landing area. Normally a change of intended landing area during the approach is not acceptable, as one of the main competencies the examiner is required to assess during this exercise is the candidate's ability to fly an approach to a pre-selected landing area. **A change of field is only acceptable from an altitude or point in the approach from which a landing could still have been made on the original landing site.** Such a change would be acceptable if upon reaching the lower altitude, the candidate observed an obstruction on approach or that field surface conditions were not suitable and such conditions were not apparent when the approach as commenced, but another suitable or obstruction free area is selected.

9.13 Ex. 23 – Pilot Navigation

- (1) Pre-flight Planning Procedures
 - (a) Assign a cross-country route of at least 2.5 hours cruising range, with an intermediate stop. Select a destination that is beyond the fuel range of the aeroplane, with a loading scenario that does not permit full fuel tanks, or one where fuel is not available at the destination for the return flight, therefore requiring an intermediate fuel-stop. When assigning the cross-country routing, examiners should select a destination that will provide the candidate with suitable terrain and sufficient enroute checkpoints. Avoid using a route that would parallel a major roadway, waterway or shoreline.
 - (b) Flight-planning software is permitted. If software was used, the examiner will ask the candidate to manually recalculate one leg, in response to a scenario detailing a change of upper winds or cruising altitude, by using an E6B or equivalent flight calculator to ensure competency without the use of software or online services.

- (c) Preparation should be completed within 45 minutes, unless the candidate encounters delays in obtaining weather or other necessary information. Additional time is allowed to complete the weight and balance calculations for the actual flight test flight. The candidate's completed calculations will be verified for accuracy.
 - (d) If the cross-country flight is assigned in advance, the candidate may make preliminary preparations only such as initial route selection, paper chart preparation, determination of headings and selection of possible alternates and initial flight log entries prior to the flight test. In this case, on the day of the flight test, the candidate will, after obtaining weather information, complete all final preparations including weight and balance computations for the actual flight within 45 minutes. The candidate's completed calculations will be verified for accuracy.
 - (e) Under normal circumstances, if the candidate requires more than double the allotted time period to complete the planning and preparation, the candidate's performance would be deemed to be unacceptable.
 - (f) The candidate should not be penalized if he/she chooses not to draw 10° drift lines on the chart. (The enroute performance evaluated by 23C will indicate whether the candidate can do without them or not).
- (2) Departure Procedure
- (a) Assessment will be based on the candidate's demonstrated ability to carry out an appropriate and efficient departure procedure. If, due to operational requirements beyond the control of the candidate such as vectors from ATC, the candidate is unable to fly a pre-determined departure procedure, assessment should be based on the ability to adapt to the new circumstances.
 - (b) The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading and dead-reckoning.
- (3) En Route Procedure
- (a) The candidate is expected to give you an ETA for the destination or first turning point upon setting heading and achieving level flight for the enroute portion. Where the routing has very few landmarks, additional time may be allowed for the candidate to determine if there is a track error. A better choice of routing, where available, would help prevent the need for additional time.
 - (b) The candidate is expected to use **systematic** navigational techniques, not track crawling, to a checkpoint or landmark to determine any track error and to confirm or revise the heading. A ground speed check using the time and distance travelled to that point is expected to confirm or revise the ETA.
 - (c) The candidate is expected to make sufficient in-flight entries to assist with position estimating, ground speed checks, ETAs at various check points on the navigation flight log.
 - (d) The use of electronic navigational aids including multi-function displays is prohibited for the En-Route evaluation. The candidate must demonstrate competency by map-reading and dead-reckoning.
- (4) Diversion to an Alternate
- (a) When you ask for a diversion after a series of other flight test manoeuvres, you may be of assistance in determining the exact location and orientation and allow enough time for the candidate to arrange the chart. Only then should you request the diversion.
 - (b) The candidate is expected to initiate the diversion without undue delay. This requires extensive ground training and practice to improve the candidate's ability to quickly determine a track to follow, an approximate heading and an approximate time enroute without the need to loiter in a holding pattern.
 - (c) The examiner will specify an initial altitude to fly. When practicable, a part or all of the diversion should be conducted at a height between 500 and 1000 feet above ground or at a minimum safe altitude, whichever is higher. The candidate is expected to maintain declared altitudes within

±100 feet. The candidate may change altitudes to suit the topography or the scenario and is expected to communicate intentional altitude changes to the examiner.

- (d) Estimated enroute and arrival times may be approximate but should have a reasonable degree of accuracy. With respect to the estimated time of arrival and the actual time of arrival at the alternate, no hard numbers have been established in the criteria. Examiners may accept an estimated time of arrival for this item that is reasonable and would indicate that the diversion could be conducted as planned.
- (e) Even though the routing may have to circumvent mountainous terrain, a practical demonstration of skills in mental dead-reckoning navigation is required during the flight test for the Commercial Pilot Licence. The goal is to determine if the candidate is able to perform a diversion over vast terrain having no major landmark.
- (f) The technique of following geographical references to an alternate destination is reserved for the flight test to obtain a Private Pilot License and is therefore not suitable for the flight test for the Commercial Pilot Licence. For this test, the examiner will assess the candidate's ability to navigate by dead-reckoning.
- (g) When it is feasible to test the diversion at low level, the examiner must consider the following:
 - (i) regulatory restrictions and built up areas etc.;
 - (ii) safety considerations;
 - (iii) suitability of the area, terrain elevation, altitude and obstructions;
 - (iv) annoyance to people or livestock.
- (h) Do not set up the candidate for a possible contravention of the regulations. The selected destination should not require the candidate to over-fly populated areas.
- (i) Rulers, notched pencils, protractors and computers will not be used for this procedure.
- (j) The use of electronic navigational aids including multi-function displays is prohibited for this evaluation. The candidate must demonstrate competence by map-reading. Once Ex. 23 has been completed and assessed, electronic aids may be used for the return to base.

9.14 Ex. 24 – Instrument Flying and Use of Radio Navigation Aids

- (1) Both the flight test guide and flight test report place Exercise 24 - Instrument Flying as nearly the last flight test item. This is not intended to give you the impression that instrument flying must come at the conclusion of the test. Examiners who have completed this item right after the en route portion of the navigation item have indicated better results, due to the candidate being comparatively more alert and better able to concentrate on instrument flying. The possible effect on the instruments from such items as spinning and spiral dives is another reason why many examiners complete this item early in the flight test.
- (2) 24A. Full Instrument Panel
 - (a) After donning a view-limiting device, the candidate should be allowed enough time to settle down in straight and level flight, before asking for specific manoeuvres. The required full-panel manoeuvres should be conducted before requesting limited panel work. A full panel of flight instruments or a primary flight display is required.
- (3) 24B. Limited Instrument Panel
 - (a) This item is conducted without reference to the attitude indicator and the heading indicator, in the case of a traditional instrument panel; or without reference to a primary flight display and multi-function display (standby instruments only), in the case of a technically-advanced aeroplane. Electronic flight display failures may be simulated in accordance with the manufacturer's Guide for DPEs and CFIs or POH/AFM Supplements as appropriate to the aircraft type.

- (b) During the rate-one turn, the angle of bank may be different than prescribed by the rule-of-thumb of 10% of the airspeed + 7, if in knots. This is only accurate at a speed of 140 KTAS. A more accurate general rule-of-thumb is to use an angle of bank equivalent to 15% of your KTAS.
 - (c) Remember that **one heading correction is permitted** for the timed turn.
- (4) 24C. Recovery from Unusual Attitude
- (a) Only one unusual attitude recovery is required and is performed using limited panel. You should vary the type of unusual attitude that you request from candidate to candidate, e.g. nose up or down attitudes, with or without bank, etc. This samples each area of the training and confirms that in fact the training is being conducted.
 - (b) This item is conducted without reference to the attitude indicator and the heading indicator in the case of a traditional instrument panel; or without reference to a primary flight display and multi-function display in the case of a technically-advanced aeroplane, but candidates will be asked to use the standby instruments.
 - (c) For the assessment of recovery from an unusual attitude, you should place the aircraft in the desired attitude and then give control to the candidate stating loudly and clearly "You have control".
 - (d) The aircraft should not be allowed to approach limiting airspeeds before giving control to the candidate. All unusual attitude recoveries should be completed at a height recommended by the manufacturer or no less than 2,000 feet above ground, whichever is the greater.
- (5) 25D. Radio Navigation
- (a) A view-limiting device is required to be worn for this item to simulate dark night conditions away from built-up areas. It is the responsibility of the candidate to provide an aircraft equipped with serviceable radio navigation equipment.
 - (b) **If installed, the candidate will utilize certified GNSS equipment** for this item. Have the candidate select terminal mode with 1 NM course deviation sensitivity, if it is not already in that mode.
 - (c) The candidate will determine the position of the aeroplane relative to a GNSS waypoint, VOR or NDB and fly a procedure that will intercept and establish the aeroplane on a track or bearing specified by the examiner to or from the station or waypoint. The required track will be maintained until waypoint passage has been identified or described by the candidate.

9.15 Ex. 29 – Emergency Procedures/Malfunctions

- (1) If you are not thoroughly familiar with the flight test aircraft, study the POH before asking the candidate to demonstrate the ability to deal with various simulated emergencies.
- (2) You will request three (3) emergency procedures in testing this item. The three emergencies will be evaluated separately. Do not compound unrelated emergencies or malfunctions. You should use a random sampling system, varying the emergency procedures requested, to prevent "Your" flight test from becoming known to the candidates and to ensure all systems and emergency procedures have been covered in training.
- (3) It is entirely at your discretion, whether the flight-test items are tested in the air or on the ground. However, when safety of the aircraft is not affected, an attempt should be made to assess the candidate's ability to perform emergency procedures under realistic conditions by simulating at least one emergency/malfunction during flight.
- (4) One method used by several examiners that is recommended for some of the emergencies is to evaluate them before engine start or after shutdown. The examiner places all ancillary controls as they would be in cruise flight then presents a scenario, e.g.: "Engine Fire in Flight" or any other emergency listed in the POH/AFM. The candidate is expected to carry out the emergency procedure by actually moving the

controls appropriately and then follow-up with the applicable checklist. Your evaluation of the candidate actually performing the drill is more valid than having the candidate recite a procedure from memory.

9.16 Ex. 30 – Radio Communications

- (1) The demonstration of correct radio procedures throughout the whole flight requires you to assess this item when the flight has been completed.
- (2) Assessment is to be based upon the candidate's ability to demonstrate a practical knowledge of the radios/avionics installed. The candidate is expected to use proper radio procedures and phraseology, respond to and follow ATC clearances and instructions to obtain weather information and to communicate flight plan changes and updates. Where necessary, this flight test item can be simulated when the flight test is not conducted near an ATC facility. If required, you can assess elements of this item on the ground. The use of practical scenarios is an excellent method to let the candidate decide which radio communication services to use.

10.0 PRIVATE AND COMMERCIAL PILOT LICENCE – HELICOPTER

- (1) The following guidance information is offered to assist the examiner to conduct a thorough flight test. These recommendations will aid in making accurate assessments of the candidate's skill and knowledge.

10.1 Airmanship

- (1) Airmanship is not always listed in the performance criteria for each item, but it is an integral part of the performance of each item, when relevant, and should be evaluated.

10.2 Item Ex. 2 – Preparation for Flight

- (1) Documents and Airworthiness
 - (a) Ensure that questions asked are relative to the helicopter being used for the flight test. Emphasize the maintenance release conditions, deferred defects and the number of hours or calendar time remaining before the next maintenance action is due.
 - (b) Suggest a scenario outlining a defect discovered during a pre-flight inspection or during the flight and ask the candidate to write down the defect in a mock journey log. Following the entry in the mock journey log, ask questions about the impact of that discovery for the proposed flight.

Note: A mock journey log may be created by downloading a Temporary Aircraft Journey Log form (26-0603) from the following site: <http://www.wapps.tc.gc.ca/Corp-Serv-Gen/5/Forms-Formulaires/searchrs.aspx?keywords=&FormNumber=26-0603&category=All&stat=&btnSubmit=Submit>

- (2) Helicopter Performance and Limitations
 - (a) The candidate may use the Flight Manual to determine information other than the limitations listed in the flight test guide as memory items. For some of the memory items, depending on the aircraft type and where placards are accessible in flight, the candidate may refer to the equivalent placards illustrated in the Helicopter Flight Manual to quote limitations.
 - (b) Record the answers given to questions regarding limitations and operational data so that, during the flight test, the actual limitations and operational data used may be compared. Keep questions related to the Flight Manual practical and operational in nature, particularly if the conditions of temperature, wind strength, high density altitude, etc. existing at the time of flight test can be utilized or, if not, by incorporating them in a scenario.
- (3) Weight and Balance, Loading
 - (a) Make this a practical exercise and relate the weight and balance problem to the proposed cross-country flight (Exercise 20). Remember that the time required computing the weight and balance is not normally part of the one (1) hour or forty five (45) minutes allowed in Exercise 20.

- (b) The candidate should be asked to correct the loading where the C of G is beyond limits, and questioned to determine understanding of extreme C of G locations and the resulting effect on helicopter handling and performance. It is recommended to use a scenario-based example such as: Where a passenger or passengers with equipment were to be embarked or disembarked at a certain location where the helicopter could not be shut down because of operational reasons. How would the pilot ensure that the aircraft is within the C of G limits?
 - (c) Should there be any doubt in the examiner's mind with regard to the completed weight and balance form presented by a candidate, the examiner should determine the level of knowledge by thorough questioning in this area.
- (4) Pre-flight Inspection
- (a) The candidate should be questioned with regard to the appropriate action to be taken if an unsatisfactory item is detected during the pre-flight inspection. For example, you may ask a question about the action to be taken regarding a filter blockage, as applicable to the type.
 - (b) Failure by the candidate to visually, or by other means, confirm that there is sufficient fuel and oil for the intended flight is disqualifying and will constitute a failure of the flight test. It is intended that the visual fuel check be an actual check of the tank (or tanks) as opposed to just a check of the fuel gauges. If the helicopter design dictates that visual checks are not practicable or possible, the examiner may accept fuel chits, fuel logs, etc., that in the examiner's judgment meet the confirmation requirements.
 - (c) The candidate is expected to conduct an oral passenger safety briefing at this time. Should the candidate omit the briefing, the examiner will ask the candidate to provide one. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing.
- (5) Knowledge of Systems and Components
- (a) A helicopter pilot may have to describe a serviceability problem to maintenance personnel, especially when in a remote location; therefore, candidates are expected to know the name of major components, as applicable to the type, their location and their basic function. For example, when having a problem starting a turbine engine, the pilot is expected to be able to tell maintenance personnel if the bleed valve is open or closed.
 - (b) When asking the candidate to describe of the basis function of a component or system, the expected depth of the knowledge could differ depending on whether the flight test is private or commercial. In all cases, ask practical questions that would probe a deeper understanding of a component or system from a commercial candidate than a private one and mark the performance according to the type of flight test performed.
- (6) Engine Start/Run-up/Cool-down/Shutdown
- (a) The candidate should use the checklist provided with the helicopter. If the examiner does not agree with the content of the checklist, the candidate should not be penalized. This would be an item for the examiner to discuss with the training unit or establishment, and if necessary the Regional Flight Training Section. The checks carried out by a candidate should cover at least the items mentioned in the Helicopter Flight Manual.
 - (b) The candidate should be questioned at this time to determine what action would be taken if a problem is revealed (e.g. excessive magneto-drop, a hot start, engine overspeed or instruments not indicating when anti-ice or carburetor heat controls are selected and/or reset etc.).

Note: A check of flight controls for freedom and the correct movement of the corresponding rotor blades are mandatory and will be conducted before flight. In some cases during the winter months the check can be performed during the pre-flight inspection while the aircraft is still inside the hanger to avoid damage to the rotor head. Should the candidate neglect this check, the examiner will ask the candidate to perform it and a major error will be noted.

10.3 Item Ex. 3 – Ancillary Controls and Aircraft Systems

- (1) The candidate should demonstrate an adequate practical knowledge of the operation of systems installed on the helicopter being used for the flight test and will be expected to use all ancillary controls in the correct manner during the flight. If the operation of a system or the use of an ancillary control was not required during the flight, the examiner may require a demonstration, simulated or actual, to evaluate the candidate's practical knowledge of that control or system

10.4 Item Ex. 9 – Takeoff and Landing To and From the Hover

- (1) This item must be assessed on a continuing basis throughout the flight test and a mark awarded only after the final landing.
- (2) The candidate is expected to demonstrate accuracy maintaining position and heading while respecting all operating limitations during the takeoffs and landings to and from the hover. The examiner should request into and out of wind demonstrations by using scenarios, whenever possible. During the takeoff, verify that the candidate checks that the skids are free, the control response, the position of the cyclic for the C of G and the power required to hover. In a stable hover, verify that the candidate checks temperatures, pressures and warning lights.
- (3) Failure to carry out a take-off check will result in failure of this item.
- (4) When landing, a seating check will be performed as appropriate to the type of landing surface. For example, when landing on a paved surface the seating check only needs minimal precaution compared to a landing on an unprepared surface.

10.5 Item Ex. 10 – Hover, Taxi and Hovering Turns

- (1) Ex. 16 is tested in conjunction with Ex. 10, which includes hover taxiing sideways and rearwards. These items may be accessed during the demonstration of other items or by itself.
- (2) The examiner must confirm the candidate's lookout particularly when hover taxiing or turning in a hover in a confined area, a busy ramp or an area of sloping ground. In addition to into-wind demonstrations, the candidate should be asked to hover and hover taxi crosswind and downwind, when conditions permit.

10.6 Item Ex. 11 – Engine Failure at the Hover or Hover Taxi

- (1) It is important that the examiner use a suitable landing area, such as a runway or a smooth grassy surface. If you are not familiar with the site, it is strongly recommended to test the surface prior to the engine failure, by landing on it.

10.7 Item Ex. 12 – Transitions

- (1) In case of an actual emergency, a departure or an arrival should be conducted into wind, whenever possible. As it is not always possible to depart or arrive into wind because of obstacles or runway direction, the candidate is expected to compromise in order to maximize the possibility of a successful landing in the event of an actual emergency.

10.8 Item Ex. 14 – Malfunctions and Emergency Procedures

- (1) The examiner will determine if helicopter performance, weather conditions and other factors permit the safe conduct of simulated malfunctions or emergency procedures in flight or on the ground with the engine running. At least two of the malfunctions or emergencies should be simulated in flight for the Commercial Pilot Licence (CPL) candidate and at least one of the malfunctions or emergencies should be simulated in flight for the Private Pilot Licence (PPL) candidate. The other malfunction or emergency may be tested on the ground with the engine shut down.

- (2) Examiners should use a random sampling system, so that candidates will not know in advance what to expect. A random sampling system should also include diversity in the types of malfunctions or emergencies given to the candidate during the flight test. For example, if a candidate is given as a first malfunction a simulated transmission chip indicator, a second malfunction should not be a malfunction that required a similar outcome like a loss of transmission oil pressure.
- (3) Any malfunctions or emergencies that is listed in the Pilot Operating Handbook (POH) or Rotorcraft Flight Manual (RFM) and/or any malfunctions or emergencies relevant to the type that are part of the Flight Training Manual may be simulated and assessed during any portion of the flight test, including tail rotor control failure.
- (4) The examiner must ensure, when simulating emergency or abnormal flight situations that suitable landing areas are available, if required to carry out a prompt precautionary landing. If a site is found to be unacceptable for the purpose of the test upon closer inspection, the examiner may decide to not proceed to an actual landing by requesting that the candidate recover to a hover or overshoot to a climb.
- (5) When a landing is accomplished following a simulated in-flight emergency to an unknown surface, the landing will be at the discretion of the examiner and only after assessing the surface condition from a hover.

10.9 Item Ex. 15 – The Circuit

- (1) This item must be assessed on a continuing basis throughout the flight test and a mark awarded only after the final landing. This will ensure that the candidate is assessed on the departure and entry procedures as well as a complete circuit after a takeoff leading to a landing.
- (2) Examiners are expected to familiarize themselves with the type of circuit, speeds, heights, and power settings used by the FTU during the training.
- (3) Whenever possible, use both controlled and uncontrolled aerodromes during the test. The candidate should be questioned on controlled aerodrome procedures or given simulated ATC clearances and instructions when the test is conducted entirely at an uncontrolled aerodrome. Conversely, the candidate's knowledge of uncontrolled aerodromes and helicopter procedure at those aerodromes should be assessed when the test is entirely conducted at controlled aerodromes.

10.10 Item Ex. 16 – Sideways and Rearward Flight

- (1) This item is tested in conjunction with Ex. 10.

10.11 Item Ex. 17 – Deceleration and Steep Turn

- (1) The examiner will present a scenario requiring deceleration and a steep turn to a reciprocal heading in order to avoid an obstacle. The examiner will specify an entry heading and an altitude for the manoeuvre.
- (2) It is recommended that this manoeuvre be conducted at 500 feet AGL, and in any case not lower than 300 feet AGL. Caution should be exercised, especially in strong wind conditions, to not lose translational lift during any turn from into the wind to downwind at a reduced airspeed.
- (3) Because a scenario is limited by the restriction of height above ground, the examiner must exercise good judgment and care in the selection of realistic scenarios. You must ensure that the candidate fully understands the scenario that may involve avoidance of towers or weather phenomena in order to avoid confusion when assessing the item.
- (4) The candidate is expected to execute, from cruise speed and a specified altitude, a deceleration to a speed between 50 and 60 knots (or MPH) while maintaining an altitude within ± 200 feet, followed immediately by a steep turn with at least 30° , but not exceeding 45° , of bank through a 180° change of heading to the reciprocal of the entry heading ($\pm 20^\circ$). The candidate is expected to remain within 200 feet of the entry altitude and an indicated airspeed ranging between 40 to 70 knots (or MPH) during the turn.

An airspeed within ± 10 knots (or MPH) of the speed range may be acceptable as a major error if corrected in a timely manner by the candidate. A speed deviation more than 10 knots (or MPH) above or below the speed range will be deemed to be a critical deviation. The turn will be terminated with a return to cruise speed at an altitude within ± 200 feet of the entry altitude.

- (5) A good time to test this item is after Item Ex 20D Alternate Destinations.

10.12 Item Ex. 18 – Autorotations

- (1) The engine failure will be simulated in accordance with the manufacturer's flight manual, the technique will be agreed upon during the pre-flight briefing. Prior to this exercise and before the throttle is brought to the idle position, for simulating an engine failure, it is strongly recommended, that the examiner have assessed the engine idling capability, if it was not done during the start-up procedure.
- (2) Engine Failure at Altitude
 - (a) Engine failure at altitude will be initiated without advance warning by the examiner at a recommended height of between 1,000 feet and 1,500 feet above ground. The engine failure at altitude is usually assessed after the navigation item, but can be tested at any time during the flight test. Examiners should vary where they assess this item so as not to become predictable when testing. The examiner must ensure that a suitable landing area exists within the candidate's field of vision and within autorotational range of the helicopter, in case of a real engine failure during the simulation.
- (3) Landing or Power Recovery to the Hover/Hover-Taxi
 - (a) Two types of autorotations will be tested one straight in and one with a 180 degree turn and both will be initiated from cruise at a safe height but in no instance less than 500 feet AGL. The two types of autorotations will be initiated by the examiner in a manner that evaluates range variation during autorotation. The approaches will terminate, at the discretion of the examiner, in either a full-on landing or a power recovery to a hover or hover-taxi. The examiner must be specific when briefing the candidate and must inform the candidate early enough in the approach to accomplish a power recovery if required.
 - (b) It is very important, when doing the pre-check or HASEL check, that examiners consider the following conditions:
 - (i) aircraft weight versus outside temperature and relative humidity; and
 - (ii) ground elevation versus density altitude.
 - (c) In some cases, a certain ground elevation could feel like more than double the actual elevation, because of the increased density altitude.
 - (d) Before the candidate is allowed to demonstrate full-on autorotations or a power recovery to the hover/hover-taxi, the examiner must select a safe landing area, as full-on autorotations must only be carried out onto known suitable landing surfaces. It is also the responsibility of the examiner to be current on the type of helicopter being used for the flight test, including emergency procedures and full-on autorotations.
 - (e) The examiner will have to determine and show the candidate the boundary of the selected touchdown zone. Those boundaries will be approximate in some cases, but they must be well outlined for the candidate to see.
 - (f) Most FTUs have designated areas at their own heliport or at a nearby airport, such as the threshold of an inactive runway, where they practice this manoeuvre. It is the responsibility of the examiner to be aware of any special areas and the rules employed by the FTU for full-on autorotations.

Note: The FTU or aircraft owner's policy regarding the minimum wind requirement for full-on autorotations has to be respected when the wind is less than 10 knots.

(4) Tolerances

- (a) Where a candidate exceeds a tolerance specified in the performance criteria because of pilot error or poor technique, but recovers in a timely manner that is appropriate to the situation, the performance pertaining to that criterion may be acceptable, if safety was not compromised. In these cases, the item will be evaluated a “2”.
- (b) The performance will be deemed to be a “1”, even if a correction is made, if a tolerance is exceeded by more than double the specified tolerance because of pilot error or poor technique (not due to wind/weather, turbulence or traffic conditions). (section 408.18 of the CARs).
- (c) The candidate will be required to carry out two autorotations, one of which will include a 180-degree turn, towards a rectangular pre-selected touchdown zone that is 300 feet long by 200 wide for PPL or 200 feet long by 100 feet wide for CPL candidates. A touchdown within 100 feet of the pre-selected touchdown zone boundary may be acceptable as a major error if the candidate uses correct landing technique. A touchdown more than 100 feet from the boundaries will be deemed to be a critical deviation.
- (d) In the case of landing outside of the pre-selected touchdown zone, the candidate cannot correct or recover, as described under major deviation definitions on page 63 of this manual. There may be factors beyond the control of the candidate that resulted in a landing outside of the pre-selected touchdown zone, even if the candidate used correct approach and landing technique. In those cases, the examiner has the discretion to consider the conditions that may have caused the deviation and mark the item appropriately.

(5) Assessment

- (a) The necessity of entering into an autorotation is not only required by a partial or complete loss of power but also by various failures of the drive systems, including the tail rotor system. Ground and weather conditions bring a number of variables to an autorotation. Consequently, it is very important that a candidate be well prepared in adapting to those variables.
- (b) Examiners too often assess autorotations based only on the final outcome stating that “It was survivable; therefore full marks should be given”. Such an evaluation will ignore, in some cases, that the rotor RPM was prevented from over-speeding by a small adjustment by the examiner, that the stinger touched slightly to the ground or was prevented from touching the ground by a small correction by the examiner, etc. The outcome of such an autorotation maybe acceptable, but it is impossible to evaluate if the candidate could adapt to variable conditions and make the required corrections necessary for the outcome to always be acceptable or survivable.
- (c) To be able to evaluate the competency of the candidate to adapt and apply the necessary corrections, the assessment has to be based on the Performance Criteria as listed in Item Ex. 18.

10.13 Item Ex. 20 – Pilot Navigation

(1) Pre-Flight Planning

- (a) Unless the candidate encounters delays obtaining weather or other necessary information, preparation, excluding weight and balance computations, should be completed within 45 minutes. If the cross-country flight is assigned in advance, the candidate may make preliminary preparations such as initial route selection, map preparation, determination of headings, and selection of possible alternates and initial flight log entries prior to the flight test. In this case, the candidate should, after obtaining weather information, complete all final preparation, including weight and balance computations, within 45 minutes. When the candidate has completed the calculations, these should be verified for accuracy.

(2) Departure Procedures

- (a) The candidate will be assessed on his ability to fly the helicopter to set heading over a pre-selected point or to intercept the enroute intended track. If due to operational requirements, such as vectors from ATC, the candidate is unable to start from over the pre-selected set heading

point, assessment should be based on the ability to adapt to the new circumstances and the manner that the departure procedure is altered. Radio navigational aids, including GPS, will not be used for this procedure.

- (3) Enroute Procedure
 - (a) The candidate should be allowed enough time after setting heading to determine a track error, when suitable check points are sparse. Radio navigational aids, including GPS, will not be used for this procedure.
- (4) Diversion to an Alternate Destination
 - (a) The alternate destination item is not a test of pure navigational skills but is an assessment of the ability to proceed to an alternate destination using mental dead reckoning and geographical features such as roads, railways, rivers, etc., if they are available. Rulers, notched pencils, protractors, navigational aids and computers will not be used for this item.
 - (b) In the past the use of notched pencils had been accepted during this portion of the flight test, as they were often used in the industry. As most helicopters are now equipped with a GNSS receiver, most pilots in the industry do not fly with a notched pencil on board the helicopter. In the event of a GNSS failure most pilots will not have the option of relying on a notched pencil to help them navigate. As the flight test ought to simulate, as close as possible, the reality of a flight done in industry, notched pencils are no longer accepted during this portion of the flight test.
 - (c) It is recommended to use a scenario for testing this item. Initiate this item at the same altitude as Ex. 20C above and simulate deteriorating weather. For example, give a simulated ceiling that will force the candidate to fly at a lower altitude without entering the simulated cloud base.
 - (d) A part or all of the navigation should be carried out at 500 feet AGL or a minimum safe altitude whichever is higher. A safe height above ground, even if altered during the flight, must be maintained. The candidate is expected to let the examiner know of intentional altitude and/or heading changes. The candidate must respect the minimum altitudes over and distances from built-up areas, open-air assemblies, persons, vessels, vehicles or structures.
- (5) Radio Navigation (Commercial Only)
 - (a) As the most common navigation aid for VFR pilots is GNSS, it is recommended that the installed GNSS unit be utilized for assessment of this item. If no GPS is installed, the candidate may use either a VOR receiver or an ADF.

10.14 Item Ex. 22 – Minimum Safe Altitude Operations

- (1) This item is tested in conjunction with Ex. 20D.
- (2) This item will be assessed during the navigation to an alternate destination of Ex. 20 or at any time that the candidate is required to fly at lower levels. The candidate is expected to demonstrate good judgment when encountering livestock, built-up areas, structures, lakes or rising ground while flying at low altitudes.
- (3) The candidate must stay out of the Height Velocity Diagram caution areas except when necessary for the operation.
- (4) This item provides a good opportunity to evaluate the candidate's practical knowledge, with brief oral questions, in regard to preventative techniques to be used in the event of an encounter with poor weather or whiteout conditions. If necessary, the examiner may assess part of this item through questioning on the ground.

10.15 Item Ex. 23 – Sloping Ground Operations

- (1) The examiner will consider all factors when selecting a landing site, especially the surface conditions and the effect of the wind. This item can be tested in conjunction with the confined areas item, or any other

item that requires landing on a doubtful surface. Particular attention must be paid to the tail rotor to ensure that it is kept clear of the slope and any obstacles.

10.16 Item Ex. 24 – Advanced Takeoffs and Landings

- (1) The examiner may assess this item during the confined areas item, except for the ground effect takeoff, and the no-hover landing, which should be tested during the circuit work.
- (2) You should not request a specific takeoff or landing but rather use a scenario that allows the candidate to determine the most appropriate procedure to use. You must ensure that the conditions described in the scenario are clear to the candidate. For example, you should describe surface conditions that will lead the candidate to choose a no-hover takeoff, if that is what you want the candidate to demonstrate.

10.17 Item Ex. 25 – Confined Areas

- (1) It is highly recommended to use a scenario for testing this item particularly with candidates for the Commercial Pilot Licence. In most normal operations, a customer will ask to be brought to a particular work site and the helicopter pilot will determine the closest and most suitable area to land the helicopter. The scenario should be based on those particulars, as this requires the candidate to choose the confined area.
- (2) In some cases, the candidate will choose an area that is very large but is a logical choice. The examiner will then inform the candidate to ignore that choice for the needs of the test and to choose another smaller confined landing area. If more practicable, the other landing area may be chosen by the examiner.
- (3) If the examiner selects the confined area, the examiner must choose a site that demands careful appraisal by the candidate and not one that is either very small or very large. The objective is to determine the candidate's ability to carry out safe and efficient confined area operations; it is not to assess how small an area a candidate can operate in. The size of the site should be large enough for the type of helicopter, considering all factors. Nevertheless, the examiner may choose an alternate field if the candidate has doubts about the suitability of the site. It is not uncommon for an examiner to describe a specific confined area that is understood by the candidate to be a different one.
- (4) Examiners have to be very clear to ensure that their candidates are looking at the same site that they are describing. To avoid confusion, you could ask the candidate to describe the intended confined area back to you. Whenever possible, the approach should terminate in a hover over the proposed landing spot. Examiners should set realistic scenarios to assess sideways, backwards, slope landings and advanced takeoffs and landings.
- (5) The candidate must assess the power required for the type of departure planned. For this item, a scenario-based departure that simulates restricted performance capabilities may be used when utilizing a higher-performance helicopter for the flight test. The examiner should let the candidate know early enough in the departure of a situation requiring the candidate to reject the departure to enable a safe return to a hover or a landing.

Note: Provided the aim of the item is accomplished in a safe and organized manner, examiners should not be adversely influenced if the procedure used deviates slightly from their preferred technique.

10.18 Item Ex. 30 – Instrument Flying

- (1) After donning a view-limiting device, the candidate should be allowed enough time to settle down in straight and level flight, before specific manoeuvres are requested. The required full panel manoeuvres should be conducted before requesting limited panel work.
- (2) When assessing recovery from the unusual attitude, the examiner should place the helicopter in the desired unusual attitude and then give control to the candidate stating loudly and clearly "You have control". One nose-up or one nose-down attitude with or without bank will be demonstrated, using full

panel for private pilot candidates and using limited panel for commercial pilot candidates. Unusual attitude recoveries should be completed at a safe height or no less than 1000 feet above ground.

- (3) The flight test guide and the flight test report place Ex. 30, Instrument Flying, as nearly the last flight test item in both documents. This is not intended to give examiners the impression that instrument flying must come at the conclusion of the test. Examiners should consider conducting this item approximately mid-way through the test when planning their flight test profile.

10.19 Item Ex. 31 – Radio Communication

- (1) Assessment of correct radio procedures should be conducted throughout the flight test. This item can be simulated quite easily if the FTU is not near an ATC facility, and the examiner can assess much of this item on the ground, if required. The use of a practical scenario is an excellent method to let the candidate make the decision as to which radio communication services to employ.

11.0 MULTI-ENGINE – AEROPLANE

11.1 Ex. 1 – Aeroplane Familiarization and Preparation for Flight

- (1) A. Documents and Airworthiness
 - (a) Ensure that questions asked are relative to the aeroplane being used for the flight test. Emphasize the maintenance release conditions, deferred defects and number of hours remaining before the next maintenance action is due.
- (2) B. Performance and Limitations
 - (a) The candidate may use the Pilot Operating Handbook (POH) or Aircraft Flight Manual (AFM) to determine information other than the essential performance speeds listed in the flight test guide as memory items. Questions relating to the POH/AFM should be “operational” questions, particularly if temperature, wind strength, etc. existing at the time of the flight test can be utilized.
 - (b) The flight test guide under ‘Definitions’ refers to the technique used to determine V_{MC} for certification purposes. It is meant as information for examiners, instructors and candidates. The statement...“the aeroplane is at a minimum practical test weight with a rearmost center of gravity” comes from Advisory Circular 23-8B that explains the procedures for the conduct of certification tests under section 523.149 of the CARs (FAR 23.149).
 - (c) The multi-engine certification reference to “Weight and C.G.” is FAA Advisory Circular 23-8B, which reads as follows:

Weight and C.G. - For rudder limited airplanes with constant aft center of gravity limits, the critical loading for V_{MC} testing is most aft center of gravity and minimum weight. Aft center of gravity provides the shortest moment arm relative to the rudder thus the least restoring moments with regard to maintaining directional control. V_{MC} should be determined at the most adverse weight. Minimum practical test weight is usually the most critical because the beneficial effect of banking into the operating engine is minimized. Minimum weight is also desirable for V_{MC} testing because the stall speed is reduced.
 - (d) In this reference, it is advised that the aeroplane be loaded with the minimum practical loading that will bring the center of gravity to the aft limit. At the aft limit, the vertical control surfaces will have the shortest possible moment arm for directional control as the aeroplane will yaw around the center of gravity. The minimum practical weight allows determination of V_{MC} with minimum interference from the effects of wing stall because at lighter weights the stalling speed is slower.
 - (e) At maximum take-off weight, only the use of bank toward the operating engine will reduce the actual V_{MC} . In an aeroplane, such as the Piper Seminole, a stall would likely occur before reaching the published V_{MC} , if it were loaded close to the maximum take-off weight.
- (3) C. Principles of Flight – One Engine Inoperative

- (a) As there is no written examination for this rating, this flight test item will let you assess the candidate's practical knowledge of the challenges of power loss on the critical engine, the resulting performance degradation and the particular challenges of asymmetric thrust and various drag profiles.
 - (4) D. Weight and Balance, Loading
 - (a) Make this a practical exercise using actual weights. Ask questions to determine the candidate's knowledge of various weight limitations such as maximum landing weight and maximum zero fuel weight, if applicable. Determine that the candidate understands extreme C of G locations and the resulting effect on aircraft handling and performance.
 - (5) E. Pre-Flight Inspection
 - (a) After the candidate has completed the pre-flight inspection of the aircraft, questions relating to the flight test aeroplane should be asked. Determine if the candidate knows the function of all intakes, screens, filters, etc. Examples: The effects of the carburetor intake filter or induction air intake filter being blocked, their locations, or a broken spring on a landing gear down-lock, etc. The candidate should be questioned to determine what appropriate action should be taken if an unsatisfactory item is detected during the pre-flight inspection.
 - (b) The failure by the applicant to visually confirm that there is sufficient fuel for the intended flight is disqualifying and will constitute a failure of the flight test. It is intended that this visual check be an actual check of the tank (or tanks) as opposed to just a check of the fuel gauges. If the aircraft design dictates that visual checks are not possible, fuel chits, fuel logs or other credible means, which in your judgment meet the confirmation requirement, will be acceptable.
 - (c) The candidate will conduct an oral passenger safety briefing. If the candidate omits the passenger safety briefing, the examiner will ask the candidate to provide a briefing. This situation will be assessed as a major error and the final assessment awarded will depend upon the quality and effectiveness of the briefing.
- Note:** The candidate is expected to state the approximate flight endurance at normal cruising speed with the fuel on board. **“How much flight time with the fuel in the tank(s)?”**
- (6) F. Engine Starting and Run-up, Use of Checklists
 - (a) Check to see if the candidate uses the checklist provided for the aircraft. If you do not agree with the content of the checklist, the candidate should not be penalized. This would be an item for you to discuss with the CFI of the training unit and, if necessary, the Issuing Authority responsible for Flight Operations. The checks carried out should be in accordance with the owner's checklist and should cover at least the items mentioned in the applicable POH/AFM.
 - (b) The candidate should be questioned to determine what action would be taken if the checks revealed a problem, (e.g. excessive magneto drop, instruments not indicating a change when mixture or carburetor heat controls, etc. are selected and/or reset).
 - (c) Airmanship and the smoothness of handling during the start-up will be considered for the evaluation.

11.2 Ex. 2 – Ancillary Controls/Operations of Aircraft Systems

- (1) This flight test item is evaluated throughout the flight test. The candidate should demonstrate competency while operating the various systems installed on the aircraft and demonstrate knowledge of systems during oral questioning on any three items from the list in the flight test guide. It is advisable to complete the oral questioning of this flight test item prior to engine start.
- (2) The use of mixture control and carburetor heat, if installed, should be examined during the flight.
- (3) The use of heater and ventilation systems should also be assessed.

11.3 Ex. 3 – Taxiing

- (1) In significant winds, the candidate is expected to correctly use the controls to minimize the risk of an upset. Except when making left and right turns to verify proper functioning of the flight instruments and when other traffic and conditions permit, the candidate is expected to follow the center-line markings on taxiways where available.
- (2) Should the candidate omit the flight instrument checks, the examiner will ask the candidate to complete these checks prior to the takeoff. This will be assessed as a major error and the final assessment awarded will be dependent upon the effectiveness of the instrument check carried out.

11.4 Ex. 4 – Takeoff, Circuit and Landing

- (1) Prior to the takeoff, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner for a mutual understanding of the intended departure procedure, takeoff considerations and procedures to be used in the event of an actual engine failure during takeoff and initial climb. The crew briefing is not part of the take-off evaluation but essential to safety in the event of an actual emergency.
- (2) While it may not be possible to assess the candidate's ability to compensate for a crosswind, every effort should be made to carry out this procedure. It may be necessary to request a runway other than the one in use or it may be possible to use a nearby airport where a crosswind does exist.
- (3) Touch and go takeoffs and landings are not to be used during the flight test. Many flight-training units operate from airports with runways of insufficient length to permit touch and go landings and take-offs to be practiced safely and candidates may never have done these during training. They also increase the risk of an inadvertent gear up selection while retracting flaps and resetting the trim.

11.5 Ex. 5 – Cruising Flight

- (1) Since there is no cross-country item included in this flight test, this is the only opportunity for the candidate to demonstrate the ability to set the power controls and configure the aircraft properly for cruise flight.
- (2) The examiner must be familiar with the cruise procedures outlined in the POH/AFM. In addition to providing specific power settings and correction factors for non-standard atmospheric conditions, the manufacturer may make recommendations concerning aeroplane configuration such as the position of cowl flaps, the selection of fuel tanks and the use of various systems such as de-icing, cabin pressurization systems, etc.

11.6 Ex. 6 – Engine Failure (Cruise Flight) and Maneuvering with One Engine Inoperative

- (1) When considering a safe altitude for the conduct of this item, the examiner should take into account the safe height above ground and the single-engine service ceiling for the aircraft in question. If the engine failure is simulated during a turn, the candidate is expected to continue the turn to the assigned heading, allowing only a brief pause in the turn to gain control of the aeroplane and execute the emergency memory items. Good airmanship should prevail prior to simulating engine failures to minimize shock cooling of engine cylinders.
- (2) The candidate is expected to simulate the "Engine Failure in Flight" drill by using control application in the proper sequence and following up with the applicable checklist. The examiner will be diligent to block the propeller control from actually feathering the propeller.

11.7 Ex. 7 – Maneuvering at Reduced Airspeed (This item is not slow flight)

- (1) Use a speed that corresponds to 1.3 V_{SO} at gross weight or $V_{MC}+10$ knots, whichever is greater.

- (2) While this item is to be conducted at a SAFE ALTITUDE, the intent is to assess the candidate's ability to manoeuvre the aeroplane and extend gear and approach flaps while maintaining airspeed in the final approach speed range. Acceptable performance of this item would be important while executing a circling approach at MDA during an IFR arrival.

11.8 Ex. 8 A & B – Stall, Approach to Stall

- (1) All stall recoveries will be completed no lower than the height recommended by the manufacturer or 2,000 feet AGL, whichever is the higher. You must be aware of the manufacturer's recommendation for the type of aeroplane being used for the flight test. Particular attention should be paid to the sequence used for the retraction of the landing gear and flaps, if specified in the POH/AFM.
- (2) Item 8A requires the candidate to enter an actual stall in a clean configuration and then promptly and smoothly recover using control application in the proper sequence as well as appropriate attitude and directional control. The candidate does not have to announce the stall for 8A and will continue to the actual stall and recover without excessive loss of altitude. Where the POH/AFM states that intentional stalls should be avoided or are prohibited, the candidate is expected to recover at the first indication of an imminent stall.
- (3) Item 8B requires the candidate to approach a stall in the full-flap landing configuration, ANNOUNCE "STALL" and promptly and smoothly recover at the first indication of an imminent stall, using control application in the proper sequence and appropriate attitude and directional control while achieving a minimum loss of altitude.

11.9 Ex. 9 – Steep Turn

- (1) Ensure that the candidate has clearly stated the altitude and initial heading to be used and understands how the manoeuvre is to be flown (45° angle of bank through 180 degrees followed, without pause, by a reversal to the initial heading). **The examiner will specify the airspeed and altitude** to be maintained for the manoeuvre. A good division of attention between outside references and instrument indications is expected.

11.10 Ex. 10 – Engine Failure during Takeoff or Overshoot

- (1) This item is to be conducted at a SAFE ALTITUDE. Ensure that the altitude selected to simulate the airport elevation for an overshoot is high enough above ground level to provide a sufficient margin of safety and at the same time permit adequate climb performance. The candidate will review the correct checklist following the execution of the vital action memory items.
- (2) The most important aspect of this item is assessment of the candidate's ability to maintain safe flight control, carry out correct emergency procedures and aeroplane handling and, if the aeroplane is capable, establish a climb following the simulated failure of an engine.
- (3) **Once the approach is stabilized, the examiner will call for an overshoot, the PE will simulate failure of an engine immediately after the power has been increased to a take-off power setting. While the candidate retracts the landing gear or flaps, the examiner will bring one throttle/power lever to idle/flight idle.** The candidate is then expected to control the aeroplane using control application in the correct sequence, establish a positive rate of climb, confirm failure and carry out the balance of the memory items prior to confirming actions with the appropriate emergency checklist.

11.11 Ex. 11 A – Intentional Engine Shutdown

- (1) Present a scenario that convinces the candidate that a shut-down of one engine is required. (i.e. major oil leak, mechanical failure, etc.) The candidate should then proceed with the appropriate checklist and **simulate** an intentional engine shutdown in flight. The candidate is expected to complete this type of

emergency by following the appropriate emergency checklist, such as the “Emergency Engine Shutdown” checklist.

- (2) The subsequent course of action should reflect the candidate’s decision-making as a result of the unforeseen failure. If the aerodrome for the next item (11B) is a considerable distance away, you may restore cruise power and then, using good airmanship, simulate zero-thrust for the arrival, approach and single-engine landing, when you are closer to the airport.

11.12 Ex. 11 B – Arrival, Approach and Landing – One Engine Inoperative

- (1) Prior to conducting this item, ensure that the candidate is briefed on engine-handling procedures in the event of an unexpected overshoot. Should it become necessary to overshoot, it is expected that the candidate will use both engines and that no other simulated emergency will exist until after the overshoot has been completed. A “Single-Engine Approach and Landing” checklist should be followed for this item.

11.13 Ex. 12 – Emergency Procedures/Malfunctions

- (1) If you are not thoroughly familiar with the flight test aircraft type, study the POH/AFM before asking the candidate to demonstrate the ability to deal with various simulated emergencies. You will request three (3) emergency procedures in the testing of this item. The candidate is expected to conduct the checks in accordance with the appropriate emergency checklist.
- (2) It is recommended that at least one emergency/malfunction be simulated in flight. Examiners should not request multiple unrelated emergencies at the same time. Candidates should be aware of the “domino effect” of certain failures. It is entirely at your discretion, whether the flight-test items are tested in the air or on the ground. However, when safety of the aircraft is not affected, the attempt should be made to assess the candidate’s ability to perform emergency procedures under realistic conditions. You should use a random sampling system, varying the emergency procedures requested, to prevent ‘your’ flight test from becoming known to the candidates and to ensure all systems and emergency procedures have been covered in training.

12.0 INSTRUMENT RATING – GROUPS 1, 2 AND 3

Note: Flight tests for the transition from a Group 3 Instrument Rating to a Group 1, 2 or 4 must be conducted in an aircraft or an approved Level C or higher full-flight simulator, not in a flight training device (FTD).

12.1 Aeroplane

- (1) The following information is offered to assist you to conduct a thorough, valid and fair flight test. These suggestions will aid in making accurate assessments of the candidate’s skill and knowledge.
- (2) All flight tests will be conducted at your discretion with respect to your knowledge of local conditions, ‘Air Traffic Services’ requirements and facilities in accordance with the Flight Test Guide – Instrument Rating – Groups 1, 2 and 3 – Aeroplane (TP9939) or in the case of an Instrument Proficiency Check (IPC), in accordance with Advisory Circular 401-004 Second Edition.
- (3) Whenever possible, flight tests should be conducted in accordance with a filed IFR flight plan. The direct interaction between the candidate and ATS in an IFR-controlled environment makes the test more valid and greatly reduces the possibility of a faulty or poorly worded simulated clearance. Faulty clearances issued by examiners have been the cause of conflicts and disputes when the results were assessed as “fail”. Some failures have been successfully appealed.

12.2 IMC or VMC

- (1) You will determine the suitable weather limits for the flight test. However, flight schools or operators may impose additional restrictions, limiting operation to specific weather conditions.

- (2) It is recommended that, when a candidate proposes to do a GPS approach using a type of installed equipment with which you are unfamiliar, the flight test be conducted in VMC conditions.
- (3) The aircraft must be adequately equipped to operate in icing conditions when such conditions are reported to exist or forecast to be encountered along the route of flight. (see section 605.30 of the CARs) The aircraft must be equipped in accordance with the standards of airworthiness under which the type certificate for that aircraft was issued in addition to meeting the requirements of section 602.07 of the CAR – Aircraft Operating Limitations for the intended type of operation (VFR/IFR). Some aircraft appear to be adequately equipped for this type of operation, however, the information required to prove this may not be readily available to you, the examiner. Care must be exercised in making this determination. Aircraft must also be equipped with sufficient navigational equipment to meet the redundancy requirements of section 605.18 of the CARs – Power-driven Aircraft – IFR.

12.3 View Limiting Device

- (1) There is a requirement to have an effective means of excluding the outside visual reference available, in order to simulate instrument flight conditions. Its use is recommended. Nevertheless, you decide to what extent the device is to be used. This will depend on traffic, weather and other operational circumstances.
- (2) While the candidate is using the device, you will ensure a safe level of visibility and take on the role of safety pilot if you are not already PIC.

12.4 Use of the Autopilot

- (1) Many aircraft used for Instrument Rating flight tests have autopilots on board. The use of autopilots is encouraged, as they provide assistance to pilots facing heavy workloads during flight. The candidate may elect to use an autopilot; however it is recommended that during an initial Instrument Rating flight test at least one approach be conducted without the assistance of an autopilot.

12.5 Use of Flight Simulation Training Devices (FSTD)

Repealed

12.6 Pilot in Command

- (1) The candidate may be pilot-in-command if he or she is the holder of a valid instrument rating. Pursuant to section 401.03 of the CARs, if the candidate does not hold a valid instrument rating or the recency period of the rating has expired in accordance with Exemption NCR-040-2015 and subsection 401.05(3) of the CARs; the examiner will be the pilot-in-command when flying in accordance with a filed IFR flight plan. In either case, the examiner reserves the right to exercise all reasonable duty and care to ensure safe flight by intervening or taking control of an aircraft when any action or lack of action by the candidate seriously jeopardizes flight safety or if a breach of regulation is imminent.
- (2) Pilot examiners holding an instrument rating accreditation must be pilot-in-command during a flight test in order to consider the instrument flight time and the approaches flown by flight test candidates for the purposes of personally meeting the requirements of subsection 401.05(3) of the CARs – Recency Requirements of the CARs. [6, 6 and 6]

12.7 Ex. 1 – Pre-Flight

- (1) 1A. - Obtaining Weather Information/Weather Minima
 - (a) You will ensure that the candidate has obtained all the necessary weather information for the proposed flight. The candidate should brief you on the weather to be encountered during the test.

- (b) Many candidates obtain their weather briefing from a briefer via telephone. You may wish to have a printed copy of the weather information to aid in questioning the candidate on the interpretation and application of weather reports and forecasts.
 - (c) You should verify the candidate's knowledge of the CARs and the CAP General by asking specific questions regarding weather minima. Confirm that the candidate knows the standard take-off minima and the minima they used to determine their flight planned alternate.
- (2) 1B. - Flight Planning
- (a) It is recommended that you contact the candidate at least one day before the test and assign the flight route. If that is not possible, the candidate should be allowed at least 45 minutes to do the flight planning, excluding weight and balance computations. The candidate should be asked to calculate the weight and balance using actual weights. To make the task more realistic, it is recommended that you assign a route that will at least be partially flown on the flight test.
 - (b) Ask questions on aircraft holding and approach airspeeds for reference during the flight test. Ensure that the candidate knows that these declared airspeeds would be the "standard airspeeds" for assessing the holding and approach items. It is recommended that the answers given by the candidate be recorded.
- (3) 1C. – Cockpit Checks
- (a) Ask the candidate to perform all checks out loud in order to avoid any misunderstandings. Ensure that the candidate verifies navigation aids and that all the flight instruments required for the planned flight are functioning and serviceable. Should the candidate omit flight instrument or navigation aid checks, you will ask the candidate to complete the checks prior to the takeoff. This will be assessed as a major error and the final assessment awarded will be dependent upon the effectiveness of the check carried out.
 - (b) If the flight is to be conducted under "simulated IFR", it is important that the examiner be very specific in the pre-flight briefing of the "simulated" IMC to be encountered during the flight. This will clarify the requirement to ensure that the aircraft instruments and navigation aids are indeed functional and serviceable.

12.8 Ex. 2 – IFR Operational Knowledge

- (1) Use oral questions to assess the candidate's level of knowledge of IFR procedures. Prepare questions ahead of time in accordance with the guidance in Principles of Evaluation - Oral Questions. Many operational questions may be based on the content of the CAP General, the enroute charts and the approach charts. This item is both a "ground item" and "air item".
- (2) Acceptable knowledge must be demonstrated during the ground portion of the flight test and the application of operational knowledge will also be evaluated during the flight portion. This item will be marked at the end of the test.
- (3) You should verify the candidate's knowledge of the CARs and the CAP – General by asking specific questions regarding weather minima. Confirm that the candidate knows the standard take-off minima and the minima used to determine their flight planned alternate destination.

12.9 Ex. 3 – ATC Clearances

- (1) If the instrument rating flight test is being conducted on an aircraft that is type certified for operation by a single pilot, then the candidate will be expected to handle all of the radio communications and will be assessed accordingly.
- (2) If the aircraft is type certified for operation by two pilots, the candidate will be expected to copy and read back at least the initial IFR clearance. The pilot not flying may handle subsequent radio communications. Nevertheless, the candidate will be responsible for all communications throughout the test irrespective of who is communicating with ATC. It may happen from time to time, due to operational and "flight test"

circumstances, that you will be required to do some of the communication with ATC. If this is the case, it should be kept to a minimum. A good approach is to let the candidate know that you are pretending to be a passenger on board the aircraft and that the candidate will be expected to handle and be responsible for acting on or monitoring all radio communications.

- (3) It is recommended that the flight test be conducted in accordance with a filed IFR flight plan. However, should you choose to do the flight test in accordance with a VFR flight plan, it is absolutely essential that simulated clearances and instructions issued to the candidate be realistic and contain the proper usage of aviation/ATC phraseology. Ensure that the candidate reads back all clearances. If there is any doubt or confusion regarding a simulated clearance or instruction, it should be clarified immediately.

12.10 Ex. 4 – Departure

- (1) The tolerances listed in the Flight Test Guide - Instrument Rating assume no unusual circumstances. Consideration will be given for unavoidable momentary deviations from the tolerances due to circumstances beyond the reasonable control of the candidate.
- (2) The key in making an evaluation is to determine if the deviation from the tolerance is due to a lack of skill or due to the circumstances or atmospheric conditions. If the candidate recognizes the deviation immediately and takes corrective action such action would mitigate in favour of the candidate.
- (3) Prior to taking off, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, take-off considerations and procedures to be used in the event of an actual engine failure during the takeoff and initial climb. The crew briefing is not part of the take-off evaluation but is essential to safety in the event of an actual emergency.
- (4) The candidate's awareness and consideration for other aircraft while maneuvering on ramps and taxiways will be evaluated as part of the departure.

12.11 Ex. 5 – Enroute

- (1) The enroute phase begins on interception of the outbound leg or the top of climb, whichever occurs first, and ends at the beginning of the arrival phase.

12.12 Ex. 6 – Arrival

- (1) The arrival phase starts at the top of descent or the clearance limit of the enroute phase and ends at the Initial Approach Fix (IAF).

12.13 Ex. 7 – Holding

- (1) It is recommended that the examiner ask the candidate to obtain the holding clearance from ATC. Using this method the examiner may also copy the clearance and avoid the possibility of getting into a dispute with the candidate over the validity or content of the clearance. If simulating IFR in VMC, prepare and write down a holding clearance prior to departure and read it to the candidate when needed. When simulating holding clearances, it is very important that you issue a clearance that is complete, realistic and correct, using proper phraseology.
- (2) Make sure that the candidate reads back the holding clearance and clearly understands what is expected. Confirm the aircraft holding speed prior to departure. Ensure that candidates know they are expected to maintain this speed during the hold.
- (3) The hold entry procedure should be one specified in the Aeronautical Information Manual (AIM) TP14371 or equivalent manual, but other entry procedures that ensure remaining within the protected airspace may be used.
- (4) It is important to separate our personal training standard that strives to achieve a "book-perfect" hold entry from the flight test standard that is more reflective of real-world expectations of ATC. The objective

is simply to get established in the holding pattern in accordance with the holding clearance while using a procedure that will ensure maneuvering within the protected airspace.

12.14 Ex. 8 – Approaches

- (1) The constant descent final approach (CDFA) technique has been identified by the ICAO CFIT Task Force as an aid in preventing controlled flight into terrain (CFIT) accidents, which continue to be a major threat to civil aviation safety in Canada. Studies and accident investigations have shown that the risk of CFIT is high on NPAs. While the procedures themselves are not intrinsically unsafe, the use of the traditional step-down descent technique for flying non-precision approaches is prone to error and is therefore discouraged. Many ICAO Contracting States require the use of the CDFA technique and apply increased visibility or RVR requirements when the technique is not used.
- (2) The CDFA technique requires no specific aircraft equipment other than that specified by the title of the NPA procedure. Pilots can safely fly suitable NPAs with CDFA using basic piloting techniques, aircraft flight management systems (FMS) or GNSS systems. Where you can fly a CDFA profile, you should, as it makes sense to use a CDFA profile on most non-precision approaches (NPA).
- (3) Unless a CDFA profile is not practical to expedite descent out of icing conditions or for an approach that requires circling to land, pilots should use the CDFA technique whenever possible as it adds to the safety of the approach by reducing pilot workload and reducing the possibility of error in flying the approach
- (4) Descent to MDA/DA: The CDFA technique requires a constant descent without level-offs, flown either with VNAV guidance calculated by on-board equipment or based on manual calculation of the required rate of descent as a function of groundspeed. The rate of descent is selected and adjusted to achieve a constant descent angle to a point approximately 15m (50 feet) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown. The descent shall be calculated and flown to pass at or above the minimum altitude at any approach fix. Pilots typically employ one of three techniques for vertical path control on NPAs. Of these, the CDFA technique is preferred.
- (5) When to go Missed Approach: When the aircraft approaches the minimum descent altitude (MDA), the only options for the pilot/crew are:
 - (a) continue the descent below MDA to land with the required visual references in sight without any intermediate level-off;
 - (b) execute a missed approach upon reaching MDA, if visual conditions are not imminent; or
 - (c) level off at or above MDA and continue inbound until able to land or reaching the missed-approach point (MAP) and commencing the missed approach procedure.
- (6) If the visual references required to land have not been acquired or are not imminent when the aircraft approaches the MDA, the pilot should consider it as a decision altitude (DA) and initiate the vertical (climbing) portion of the missed approach at an altitude above the MDA sufficient to prevent the aircraft from descending through the MDA.
- (7) Likewise, if the aircraft reaches the MAP before descending to or near the MDA, the missed approach shall be initiated at the MAP. Pilots must not descend below the MDA when executing a missed approach from a CDFA. Any turns on the missed approach shall not begin until the aircraft reaches the MAP.
- (8) The candidate will perform two (2) different types of instrument approaches. **The candidate will demonstrate one RNAV(GNSS) approach.** On an initial Instrument Rating flight test, a precision approach with vertical guidance is also mandatory. If an LPV approach is substituted to demonstrate ILS approach proficiency, the other approach must be without vertical guidance.
- (9) **For IPC flight tests, one RNAV(GNSS) approach will be conducted with or without vertical guidance and the other approach** should be a traditional ground-based approach without vertical guidance. If no other ground-based approach without vertical guidance is available, an ILS approach is

acceptable. It is desirable that candidates retain and demonstrate competence flying a ground-based approach without vertical guidance.

- (10) All intermediate and final segments of non-precision approaches with approach slopes of 3.5 degrees or less will be flown using a Constant Descent Final Approach (CDFA) profile from the highest intermediate segment altitude to the minimum descent altitude (MDA). In aeroplanes, the use of step-down approach techniques where CDFA profiles are possible and practical will be considered a major error (2) in aeroplanes.
- (11) The candidate will normally perform two different approaches on different approach facilities, where they are available. This does not restrict you from conducting additional approaches due to traffic, ATC or other operational interference. One approach procedure must be demonstrated with a simulated engine failure for multi-engine aircraft in order to qualify for a Group 1 or 2 Instrument Rating.
- (12) Particular attention should be paid to the permitted tolerances during the intermediate and final segments of the final approach course. The candidate may fly at altitudes higher than the applicable minimum altitudes depicted on the approach chart, unless otherwise cleared by ATC, but descent during the intermediate and final segments of a non-precision approach should result in crossing the FAF or FAWP at or above the minimum altitudes and reaching the MDA at a distance from the MAP approximately equal to the recommended minimum visibility.
- (13) 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 margins.
- (14) If temperatures are 0°C or colder, the candidate is expected to apply the temperature corrections published in the CAP - General to all minimum altitudes on the approach chart(s) used. When intending to apply temperature correction to the minimum published altitudes, the candidate is expected to communicate that fact to ATC and/or the examiner. (Example: "Applying Temp Comp to the Arc Minimum" Refer: A.I.M. - RAC Fig. 9.1 – Altitude Correction Chart).
- (15) "Minimum Vectoring Altitudes" will be flown as cleared, as they have been established as safe altitudes under the worst-case seasonal temperature condition for the particular Terminal Area.
- (16) Where a major deviation has occurred during the approach, but safety has not been compromised, the candidate may make a timely correction and continue the approach or, if a timely correction would be difficult, the candidate is encouraged to initiate a missed approach for one additional attempt at the approach and the evaluation will be marked as a "2", if the subsequent approach is acceptable. The candidate is allowed only one (1) second attempt for an approach. Where safety has been compromised or unacceptable performance has been demonstrated, including but not limited to, descent below a published minimum descent altitude due to pilot error or poor technique, the approach will be evaluated as a "1" despite the initiation of a missed approach by the candidate.
- (17) Flight Training Units should emphasize the training and standardization of vertical path control for NPA procedures. Training should incorporate the use of CDFA profiles for non-precision approaches. Pilots should be instructed to initiate the level-off or go-around at an altitude above the MDA that would ensure the aircraft does not descend below the published MDA.

12.15 Ex. 9 – Missed Approach

- (1) To facilitate the assessment, you may ask ATC during the approach for the option of conducting a touch and go or an overshoot at the missed approach point.

12.16 Ex. 10 – Transition to Landing

- (1) Circling procedures are to be assessed, if possible. It is highly recommended that one circling procedure be assessed for the initial Instrument Rating flight test. Candidates must make the examiner aware of intent to conduct a circling approach in order that the resultant MDA flown can be assessed correctly.

12.17 Ex. 11 – Emergency Procedures

- (1) You will assess the candidate on three emergency procedures. In the case of a multi-engine (aeroplane or helicopter) or center-line thrust flight test, A. is a mandatory field, followed by B. and C. In the case of a Group 3 or Group 4 (Single-engine) flight test, use fields B., C. and D.
- (2) 11A. – Engine Failure – Multi-engine Aircraft
 - (a) At least one engine failure will be tested for Group 1, Group 2 and Group 4(Multi) Instrument Rating flight tests. An approach with a simulated engine failure will be evaluated.
 - (b) The examiner must take care to ensure that the altitude, airspeed and operating limits are sufficient to provide a margin of safety when simulating an engine failure. The method of simulating engine failures or malfunctions will be discussed with the candidate during the pre-flight briefing.
 - (c) You will simulate the engine failure without advance warning in accordance with the method recommended by the manufacturer. In the absence of a recommended method, simulate engine failures by retarding a throttle or power lever to idle. In all cases, advise the candidates of the emergency by stating “SIMULATED ENGINE FAILURE”. You may also simulate an engine malfunction that would eventually require an engine shutdown, such as a rough running engine, an engine fire, an oil pressure drop coupled with secondary indications of oil loss such as high oil temperature or a simulated visual sighting of oil streaming back over the engine nacelle or wing. Whatever method is used to simulate the engine failure, care should be taken to ensure that it is a realistic occurrence for the aircraft type. An engine will actually be shut down only in the case of an actual emergency requiring such action.
 - (d) You should determine and agree on the zero-thrust power setting for the aircraft type during the pre-flight briefing. Some manufacturers recommend power settings to simulate zero thrust. It is recommended that you set the appropriate power setting on the simulated failed engine once the candidate has carried out the emergency procedure for an engine failure and indicates that the propeller would be feathered.
- (3) 11B, C and D – Systems Malfunctions and Emergency Procedures
 - (a) If you are not thoroughly familiar with the flight test aircraft, review the POH/AFM before asking the candidate to deal with various simulated emergencies.
 - (b) Although it is recommended that one of these emergencies be tested in flight, it is the sole responsibility of the examiner to determine if aeroplane performance, weather conditions and other factors permit the safe conduct of this item in flight or on the ground with engines running. Some of the items may be tested on the ground with engines shut down.
 - (c) Examiners will not give the candidate multiple unrelated emergency drills at the same time. Consequential emergencies such as loss of certain instruments because of a suction pump failure may be simulated. Invariably, most emergency checklists will take into account consequential failures.

13.0 INSTRUMENT RATING GROUP 4 - HELICOPTER

Note: Flight tests for the transition from a Group 3 Instrument Rating to a Group 1, 2 or 4 must be conducted in an aircraft or an approved Level C or higher full-flight simulator, not in an FTD.

13.1 Helicopter

- (1) The following information is offered to assist you in the conduct of a thorough, valid and fair flight test. These suggestions will aid in making accurate assessments of the candidate's skill and knowledge

- (2) All flight tests will be conducted at your discretion with respect to your knowledge of local conditions, 'Air Traffic Services' requirements and facilities in accordance with the Flight Test Guide – Instrument Rating – Group 4 Helicopter (TP15099).
- (3) The likelihood of a newly endorsed pilot departing into IMC with an IFR certified helicopter without a more experienced pilot-in-command is very remote. Therefore, in the case of helicopters only, it is considered acceptable normal practice to simulate IFR flight in VMC with less complex helicopters that are restricted to VFR operations only.
- (4) It is important that newly IFR-rated helicopter pilots be aware that even if the IFR rating allows them to be pilot-in-command, they lack the experience of flying in IMC. Without such experience pilots could experience disorientation in IMC for the first time and have great difficulty recovering from it.
- (5) Whenever the flight test is conducted on an IFR certified Helicopter, it should be conducted in accordance with a filed IFR flight plan. The direct interaction between the candidate and ATS in an IFR-controlled environment makes the test more valid and greatly reduces the possibility of a faulty or poorly worded simulated clearance. Faulty clearances issued by examiners have been the cause of conflicts and disputes when the results were assessed as "fail". Some failures have been successfully appealed.

13.2 IFR in IMC or VMC

- (1) You will determine the suitable weather limits for the flight test. However, flight schools or operators may impose additional reasonable restrictions, limiting operation to specific weather conditions.
- (2) It is recommended that the flight test be conducted in VMC conditions when a candidate proposes to do a GPS approach using a type of installed equipment with which you are unfamiliar.
- (3) The helicopter must be adequately equipped to operate in icing conditions when such conditions are reported to exist or forecast to be encountered along the route of flight. (see section 605.30 of the CARs) The helicopter must be equipped in accordance with the standards of airworthiness under which the type certificate for that aircraft was issued in addition to meeting the requirements of section 602.07 of the CARs – Aircraft Operating Limitations for the intended type of operation. The helicopter must also be equipped in accordance with section 605.18 of the CARs – Power-driven Aircraft – IFR including the navigational equipment redundancy requirements.
- (4) Helicopter operations in accordance with IFR rules are only permitted with helicopters meeting the requirements of section 602.07 of the CARs – Aircraft Operating Limitations.
- (5) GPS equipment used for navigation must be IFR approved installations that at least meet TSO C129 requirements for an RNAV (GNSS) approach or any other function, such as use in lieu of a DME or an NDB. For the LPV approach, GPS (WAAS) receivers must be IFR approved installations that meet TSO C145a/C146a (WAAS Class 2 or 3). Databases for GPS or FMS units in the helicopter must be current.

13.3 Simulated IFR in VMC

- (1) Certified IFR Helicopters are generally multi-crew, multi-engine aircraft that are not operationally practical or financially feasible for instrument rating training and testing. Therefore, in the case of helicopters only, it is considered acceptable normal practice to simulate IFR flight in VMC with helicopters that are restricted to VFR operations only.
- (2) When the flight test is conducted in a VFR-only certified helicopter, the aircraft will be:
 - (a) approved for Day or Night VFR;
 - (b) equipped with a gyroscopic direction indicator or a stabilized magnetic direction indicator, an attitude indicator, a vertical speed indicator and an outside air temperature gauge; and
 - (c) equipped with a minimum of two different radio navigation systems of which one of the systems can be used for a precision approach, if it is an initial flight test or if the flight test is conducted to transition to an initial group 4.

- (3) In VFR-only helicopters, the GPS equipment used for navigation must at least meet TSO C129 requirements for an RNAV (GNSS) approach or any other function, such as use in lieu of a DME or an NDB. For the LPV approach, GPS (WAAS) receivers must meet TSO C145a/C146a (WAAS Class 2 or 3). Databases for GPS or FMS units in the helicopter must be current. Installations in helicopters must be approved and coupled with an HSI or a VOR/LOC/GS indicator and placarded "VFR USE ONLY".

13.4 View-Limiting Device

- (1) As most helicopters provide significant outside visibility, there is a requirement to have an effective means of excluding the outside visual reference available, in order to simulate instrument flight conditions. Its use shall not interfere in any way, with the other crew members' ability to watch for traffic or obstacles. Nevertheless, you decide to what extent the device is to be used. This will depend on traffic, weather and other operational circumstances.

13.5 Use of Autopilot

- (1) Few helicopters used for Instrument Rating flight tests have autopilots on board. The use of autopilots is encouraged, as they provide assistance to pilots facing heavy workloads during flight. The candidate may elect to use an autopilot; however it is recommended that one of the approaches be conducted without the assistance of an autopilot.

13.6 Use of Full-Flight Simulator

- (1) The examiner must be qualified on the helicopter type in accordance with sections 401.03 and 401.15 of the CARs .

13.7 Pilot-in-Command

- (1) The candidate may be pilot-in-command if he or she is the holder of a valid instrument rating or the recency period of the rating has not expired in accordance with Exemption NCR-040-2015 and subsection 401.05(3) of the CARs. Pursuant to section 401.03 of the CARs as amended, where the candidate does not hold a valid instrument rating, the examiner will be the pilot-in-command when flying in accordance with a filed IFR flight plan. In either case, the examiner reserves the right to exercise all reasonable duty and care to ensure safe flight by intervening or taking control of an aircraft when any action or lack of action by the candidate seriously jeopardizes flight safety or if a breach of regulation is imminent.
- (2) Pilot examiners holding an instrument rating accreditation must be pilot-in-command during a flight test in order to consider the instrument flight time and approaches flown by flight test candidates for the purposes of personally meeting the requirements of subsection 401.05(3) of the CARs – Recency Requirements, [6, 6 and 6].

13.8 Ex. 1 – Pre-Flight

- (1) 1A. - Obtaining Weather Information/Weather Minima
 - (a) You will ensure that the candidate has obtained all the necessary weather information for the proposed flight. The candidate should brief you on the weather to be encountered during the test.
 - (b) Many candidates obtain their weather briefing from a briefer via telephone. You may wish to have a printed copy of the weather information to aid in questioning the candidate on the interpretation and application of weather reports and forecasts.
- (2) 1B. - Flight Planning
 - (a) It is recommended that you contact the candidate at least one day before the test and assign the flight route. If that is not possible, the candidate should be allowed at least 45 minutes to do the

flight planning, excluding weight and balance computations. The candidate should be asked to calculate the weight and balance using actual weights. To make the task more realistic, it is recommended that you assign a route that will at least be partially flown on the flight test.

- (b) Ask questions on aircraft holding and approach airspeeds for reference during the flight test. Ensure that the candidate knows that these declared airspeeds would be the “standard airspeeds” for assessing the holding and approach items. It is recommended that the answers given by the candidate be recorded.

(3) 1C – Cockpit Checks

- (a) Ask the candidate to perform all checks out loud in order to avoid any misunderstandings. Ensure that the candidate verifies navigation aids and that all the flight instruments required for the planned flight are functioning and serviceable. Should the candidate omit flight instrument or navigation aid checks, you will ask the candidate to complete the checks prior to the takeoff. This may be assessed as a major error (2) and the final assessment awarded will be dependent upon the effectiveness of the check carried out.
- (b) As the majority of the flight tests are conducted under “simulated IFR”, it is important that the examiner be very specific in the pre-flight briefing of the “simulated” IMC to be encountered during the flight. This will clarify the requirement to ensure that the aircraft instruments and navigation aids are indeed functional and serviceable.

13.9 Ex. 2 – IFR Operational Knowledge

- (1) Use oral questions to assess the candidate’s level of knowledge of IFR procedures. You should verify the candidate’s knowledge of the CARs and the CAP General by asking specific questions regarding weather minima. Confirm that the candidate knows the standard take-off minima and the minima used to determine their flight planned alternate.
- (2) Prepare questions ahead of time in accordance with the guidance in Chapter 2, Principles of Evaluation - Oral Questions. Many operational questions may be based on the content of the CAP General, the enroute charts and the approach charts. This item is both a “ground item” and “air item”. Acceptable knowledge must be demonstrated during the ground portion of the flight test and the application of operational knowledge will also be evaluated during the flight portion. This item will be marked at the end of the test.

13.10 Ex. 3 – ATC Clearances

- (1) If the instrument rating flight test is being conducted on an aircraft that is type certified for IFR operation by a single pilot, then the candidate will be expected to handle all of the radio communications and will be assessed accordingly. It may happen from time to time, due to operational and “flight test” circumstances, that you will be required to do some of the communication with ATC. If this is the case, it should be kept to a minimum. A good approach is to let the candidate know that you are pretending to be a passenger on board the aircraft and that the candidate will be expected to handle and be responsible for acting on or monitoring all radio communications.
- (2) If the aircraft is type certified for IFR operation by two pilots, the candidate will be expected to copy and read back at least the initial IFR clearance. The pilot not flying may handle subsequent radio communications. Nevertheless, the candidate will be responsible for all communications throughout the test irrespective of who is communicating with ATC.
- (3) If the flight test is conducted on an IFR certified helicopter, it is recommended that the flight test be conducted in accordance with a filed IFR flight plan. As a vast number of flight tests are conducted on VFR-only certified helicopters, they will then be conducted in accordance with a flight itinerary or a VFR flight plan. When the flight test is conducted in simulated IFR in VMC, it is absolutely essential that simulated clearances and instructions issued to the candidate be realistic and contain the proper usage of

aviation/ATC phraseology. Ensure that the candidate reads back all clearances. If there is any doubt or confusion regarding a simulated clearance or instruction, it should be clarified immediately.

13.11 Ex. 4 – Departure

- (1) The tolerances listed in the Flight Test Guide - Instrument Rating assume no unusual circumstances. Consideration will be given for unavoidable momentary deviations from the tolerances due to circumstances beyond the reasonable control of the candidate. The key in making an evaluation is to determine if the deviation from the tolerance is due to a lack of skill or due to the circumstances or atmospheric conditions. If the candidate recognizes the deviation immediately and takes corrective action such an action would mitigate in favour of the candidate.
- (2) Prior to taking off, in the interest of better cockpit co-ordination, the candidate will complete a crew briefing with the examiner on the intended departure procedure, takeoff considerations and procedures to be used in the event of an actual engine failure during the takeoff and initial climb. The crew briefing is not part of the take-off evaluation but is essential to safety in the event of an actual emergency.
- (3) The candidate's awareness and consideration for other aircraft while maneuvering on ramps and taxiways will be evaluated as part of the departure as well as the use of a safe hovering height and safe taxi speed or hover taxi speed.

13.12 Ex. 5 – Enroute

- (1) The enroute phase begins on interception of the outbound leg or the top of climb, whichever occurs first, and ends at the beginning of the arrival phase.

13.13 Ex. 6 – Arrival

- (1) The arrival phase starts at the top of descent or the clearance limit of the enroute phase and ends at the Initial Approach Fix (IAF).

13.14 Ex. 7 – Holding

- (1) It is recommended that the examiner ask the candidate to obtain the holding clearance from ATC. Using this method the examiner may also copy the clearance and avoid the possibility of getting into a dispute with the candidate over the validity or content of the clearance. If this is not practical, prepare and write down a holding clearance prior to departure and read it to the candidate when needed.
- (2) When simulating holding clearances, it is very important that you issue a clearance that is complete, realistic and correct, using proper phraseology. Make sure that the candidate reads back the holding clearance and clearly understands what is expected. Confirm the aircraft holding speed prior to departure. Ensure that candidates know they are expected to maintain this speed during the hold.
- (3) The hold entry procedure should be one specified in the Aeronautical Information Manual (AIM) TP14371 or equivalent manual, but other entry procedures that ensure remaining within the protected airspace may be used.
- (4) It is important to separate our personal training standard that strives to achieve a "book-perfect" hold entry from the flight test standard that is more reflective of real-world expectations of ATC. The objective is simply to get established in the hold in accordance with the holding clearance while using a procedure that will ensure maneuvering within the protected airspace.

13.15 Ex. 8 – Approaches

- (1) The constant descent final approach (CDFA) technique has been identified by the ICAO CFIT Task Force as an aid in preventing controlled flight into terrain (CFIT) accidents, which continue to be a major threat to civil aviation safety in Canada. Studies and accident investigations have shown that the risk of CFIT is

high on NPAs. While the procedures themselves are not intrinsically unsafe, the use of the traditional step-down descent technique for flying non-precision approaches is prone to error and is therefore discouraged. Many ICAO Contracting States require the use of the CDFA technique and apply increased visibility or RVR requirements when the technique is not used.

- (2) The CDFA technique requires no specific aircraft equipment other than that specified by the title of the NPA procedure. Pilots can safely fly suitable NPAs with CDFA using basic piloting techniques, aircraft flight management systems (FMS) or GNSS systems. Where you can fly a CDFA profile, you should, as it makes sense to use a CDFA profile on most non-precision approaches (NPA).
- (3) Unless a CDFA profile is impractical to expedite descent out of icing conditions or for an approach that requires circling to land, pilots should use the CDFA technique whenever possible as it adds to the safety of the approach by reducing pilot workload and reducing the possibility of error in flying the approach.
- (4) Descent to MDA/DA: The CDFA technique requires a constant descent without level-offs, flown either with VNAV guidance calculated by on-board equipment or based on manual calculation of the required rate of descent as a function of groundspeed. The rate of descent is selected and adjusted to achieve a constant descent angle to a point approximately 15m (50 ft) above the landing runway threshold or to a point-in-space visual segment. The descent shall be calculated and flown to pass at or above the minimum altitude at any approach fix. Pilots typically employ one of three techniques for vertical path control on NPAs. Of these, the CDFA technique is preferred.
- (5) When to go Missed Approach: When the aircraft approaches the minimum descent altitude (MDA), the only options for the pilot/crew are:
 - (a) continue the descent below MDA to land with the required visual references in sight without any intermediate level-off;
 - (b) execute a missed approach upon reaching MDA, if visual conditions are not imminent; or
 - (c) level off at or above MDA and continue inbound until able to land or reaching the missed approach point (MAP) and commencing the missed approach procedure.
- (6) If the visual references required to land have not been acquired or are not imminent when the aircraft approaches the MDA, the pilot should consider it as a decision altitude (DA) and initiate the vertical (climbing) portion of the missed approach at an altitude above the MDA sufficient to prevent the aircraft from descending through the MDA.
- (7) Likewise, if the aircraft reaches the MAP before descending to or near the MDA, the missed approach shall be initiated at the MAP. Pilots must not descend below the MDA when executing a missed approach from a CDFA. Any turns on the missed approach shall not begin until the aircraft reaches the MAP.
- (8) The candidate will perform two (2) different types of instrument approaches. On an initial Instrument Rating flight test, a precision approach with vertical guidance is mandatory. An LPV approach can be substituted to demonstrate ILS approach proficiency.
- (9) For renewal flight tests, where one approach is conducted with vertical guidance or GPS, the other approach should be a non-precision approach with a traditional ground-based navigational aid, such as LOC, VOR or NDB.
- (10) One of the approaches will be demonstrated with a simulated failed engine for Group 4 instrument rating qualifications conducted on multi-engine helicopters.
- (11) All intermediate and final segments of non-precision approaches with approach slopes of 3.5 degrees or less will be flown using a Constant Descent Final Approach (CDFA) profile from the highest intermediate segment altitude to the minimum descent altitude (MDA). In helicopters, the use of step-down approach techniques is recommended where CDFA profiles are possible and practical but most COPTER approaches are not practical for use of CDFA.

- (12) The candidate may fly at altitudes higher than the applicable minimum altitudes depicted on the approach chart, unless otherwise cleared by ATC, but descent during the intermediate and final segments of a non-precision approach should result in crossing the FAF or FAWP at or above the minimum altitudes and reaching the MDA at a distance from the MAP approximately equal to the recommended minimum visibility.
- (13) 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 margins.
- (14) If the temperatures are 0°C or colder, the candidate is expected to apply temperature corrections published in the CAP - General to all minimum altitudes on the approach chart(s) used. When intending to apply temperature correction to the minimum published altitudes, the candidate is expected to communicate that fact to ATC and/or the examiner. (Example: "Applying Temp Comp to the Arc Minimum" Refer: A.I.M. - RAC Fig. 9.1 – Altitude Correction Chart).
- (15) "Minimum Vectoring Altitudes" will be flown as cleared, as they have been established as safe altitudes under the worst-case seasonal temperature condition for the particular Terminal Area.
- (16) Where a major deviation has occurred during the approach, but safety has not been compromised, the candidate may make a timely correction and continue the approach or, if a timely correction would be difficult, the candidate is encouraged to initiate a missed approach for one additional attempt at the approach and the evaluation will be marked as a "2", if the subsequent approach is acceptable. The candidate is allowed only one (1) second attempt for an approach. Where safety has been compromised or unacceptable performance has been demonstrated, including but not limited to, descent below a published minimum descent altitude due to pilot error or poor technique, the approach will be evaluated as a "1" despite the initiation of a missed approach by the candidate.

13.16 Ex. 9 – Missed Approach

- (1) To facilitate the assessment, you may ask ATC during the approach for the option of conducting a touch and go or an overshoot at the missed approach point.

13.17 Ex. 10 – Transition to Landing

- (1) It is highly recommended that one of the approaches be terminated by a landing for the initial Instrument Rating flight test. If possible, such an approach should be planned in a manner that requires some maneuvering during the transition to landing. At some airports a circling approach is the only type of approach available, which will be considered as maneuvering during the transition to landing.

13.18 Ex. 11 – Emergency Procedures

- (1) You will assess the candidate on three emergency procedures. In the case of a multi-engine flight test, A. is a mandatory field, followed by B. and C. In the case of a single-engine flight test, use fields B., C. and D.
- (2) 11A. – Engine Failure – Multi-engine helicopter
 - (a) At least one engine failure will be tested for multi-engine Instrument Rating flight tests. An approach with a simulated engine failure will be evaluated.
 - (b) The examiner must take care to ensure that the altitude, airspeed and operating limits are sufficient to provide a margin of safety when simulating an engine failure. The method of simulating engine failures or malfunctions will be discussed with the candidate during the pre-flight briefing. You will simulate the engine failure without advance warning in accordance with the method recommended by the manufacturer. It is permitted to use an OEI training mode switch or training module that can simulate single-engine, if it is functional. In the absence of a

recommended method, the engine failures will be simulated by retarding a throttle to idle. In all cases, advise the candidates of the emergency by stating "SIMULATED ENGINE FAILURE".

- (c) You may also simulate an engine malfunction that would eventually require an engine shutdown such as engine oil pressure below limit or Engine fire in flight. Whatever method is used to simulate the engine failure, care should be taken to ensure that it is a realistic possibility for the helicopter type without compromising safety. An engine will actually be shut down only in the case of an actual emergency requiring such action.

(3) 11B, C and D – Systems Malfunctions and Emergency Procedures

- (a) Although it is recommended that at least one of these emergencies be tested in flight, it is the sole responsibility of the examiner to determine if helicopter performance, weather conditions and other factors permit the safe conduct of this item in flight or on the ground with engines running. Some of the items may be tested on the ground with engines shut down.
- (b) Examiners will not give the candidate multiple unrelated emergency drills at the same time. Consequential simulated emergencies such as an engine chip detector indication may be followed by a simulated engine failure.

14.0 FLIGHT INSTRUCTOR RATING

- (1) Please review the section entitled "Flight Instructor Rating Flight Test" on Pages 52 to 54 of this manual.
- (2) The privileges sought will determine the nature of the test. Although the candidate must be prepared to demonstrate the ability to instruct effectively any of the applicable exercises, the test is a sampling of performance designed to permit completion of the test in a reasonable time. The test for an aeroplane or helicopter flight instructor rating will sample the exercises required for training toward a private or commercial pilot licence, night rating, multi-engine, instrument rating or Class 4 instructor rating, as appropriate. The test for upgrading to a Class 2 rating, aeroplane or helicopter, will include an assessment of knowledge of Chief Flight Instructor (CFI) and supervisor responsibilities. The test for upgrading to a Class 1 rating will include an assessment of the ability to train instructors. The test for an aerobatic instructor rating will sample the aerobatic manoeuvres listed in subsection 421.91(3) of the CARs Personnel Licensing Standards. Renewal flight tests for these ratings will, at the discretion of the examiner, include assessments related to any of the privileges of the Flight Instructor Rating held or sought.
- (3) The flight test for the flight instructor rating consists of three phases - Ground, In-flight and Post-flight. Details of the three phases of the flight test are given in the Flight Test Guide – Flight Instructor Rating (TP5537) under the headings Aim, Description and Performance Criteria. Barring unforeseen circumstances, such as weather or aircraft unserviceabilities, the test, including all phases, will not take more than 4 hours to complete.
- (4) After determining the candidate's admissibility for the flight test, the examiner will present a training scenario applicable to a student pilot of average ability detailing background knowledge and flight experience. This can be done by describing the student or by providing an actual or sample Pilot Training Record (PTR) or personal logbook. The candidate will then prepare an appropriate training lesson.
- (5) During the ground portion, the candidate will present preparatory ground instruction and a pre-flight briefing appropriate to the planned lesson. The examiner will play the role of the student and will endeavour to keep the scenario as realistic as possible by responding to questions and inquiring for further detail where details may be sketchy in a manner that emulates a typical well-motivated student pilot.
- (6) During the flight portion, the examiner will occupy the seat normally occupied by the student and will have the candidate teach the exercise for which preparatory ground instruction has been given during the ground portion of the test and then will choose other impromptu exercises to be taught. For these impromptu exercises, it will be assumed that all necessary preparatory instruction and pre-flight briefing

have been given. Upon return, the candidate will conduct a post-flight debriefing of the examiner's performance while role-playing as a student during the flight.

- (7) After the flight test is completed, the examiner will conduct a de-briefing of the candidate's performance. Where the candidate has been recommended for the test, the recommending instructor should be present at the de-briefing.
- (8) Role-playing may have to be suspended from time to time in order to accommodate various situations. The examiner will make clear when the role-play is being suspended and when it is being re-started. If the examiner determines that a demonstration or explanation is sketchy, unclear or the outcome uncertain, the examiner may request clarification of the sketchy or unclear explanation or require the candidate to repeat all or portions of that task or manoeuvre. For the flight portion, role-play should commence after the run-up to allow the candidate to focus on the run-up task.
- (9) The examiner or candidate may discontinue the test at any time when the degree of competency demonstrated makes the candidate ineligible for the rating sought.
- (10) The "Flight Instructor Rating Assessment" section of the Flight Test Guide – Flight Instructor Rating (TP5537) provides criteria and guidelines for the examiner. For any assessment other than FAIL, the stated aim must be met and, in the judgment of the examiner, the candidate's action is expected to result in an acceptable level of understanding by a student.

14.1 Overall Planning and Organizing of a Lesson

- (1) For an aeroplane or helicopter instructor rating, the examiner will role-play as a student training for a private pilot licence, a night rating, a commercial pilot licence, multi-engine, instrument rating or a flight instructor rating, as appropriate. For an aerobatic instructor, the examiner will role-play as a student being trained to perform aerobatic manoeuvres or to obtain an aerobatic instructor rating, as appropriate.
- (2) Details of the student, such as background, flight experience and ability, will be given. This can be done by describing the student or by providing an actual or sample Pilot Training Record or logbook. The aim is to determine that the candidate can evaluate the training needs of a student, develop a training plan for the day and prepare a lesson to meet those needs.
- (3) The candidate will be required to determine an appropriate range of activities for approximately one hour of flight instruction with this student and identify an exercise or exercises needing preparatory ground instruction. Allow a reasonable period of time, not exceeding 30 minutes, for the candidate to prepare for the lesson. Where the exercise to be planned is quite extensive and complex, such as navigation, the exercise may be assigned in advance of the flight test date to allow a more efficient use of time for the flight test.

14.2 Preparatory Ground Instruction

- (1) The candidate will be asked to present preparatory ground instruction appropriate for the planned flight lesson. Assume that the necessary ground school topics have been completed. When the lesson includes several exercises, preparatory instruction will be requested for only one of them. For the Class 1 instructor rating, the activities here will sample preparatory ground instruction appropriate for the training of instructors.
- (2) Assessment will be based on the candidate's ability to apply the instructional techniques and learning factors recommended in the Flight Instructor Guide. The instructor candidate must involve the student (examiner) through developmental questioning and by obtaining feedback that confirms understanding of the new material.
- (3) The class of Flight Instructor Rating awarded will be based on the candidate's assessment in accordance with the marking scale in the Flight Test Guide.

14.3 Pre-Flight Briefing

- (1) The candidate is expected to present a pre-flight briefing appropriate to the planned flight lesson. It will be assumed that all necessary preparatory ground instruction has been completed. The candidate will brief the student (examiner) immediately before the flight so that the student will understand how the flight lesson planned and organized in the first part of the test, will be conducted. Where a flight lesson includes manoeuvres for which preparatory ground instruction or flight lessons that have been completed at an earlier date, the pre-flight briefing should include a brief review of key points to confirm adequate student retention in preparation for the in-flight review.
- (2) The candidate must share the flight lesson plan with the student by outlining the sequence of events to be covered for the entire flight. The pre-flight briefing must also cover pertinent weather and safety considerations that apply to the specific lesson.

14.4 Flight Proficiency

- (1) The candidate's flight proficiency, including pre-flight procedures, will be observed throughout the test. In addition, the examiner will request that the candidate perform certain impromptu manoeuvres during the flight test. The candidate is expected to be able to perform the procedures and manoeuvres to at least the Commercial Pilot skill level while giving effective flight instruction.
- (2) Assessment of Class 1, 2, or 3 – aeroplane, helicopter and aerobatic will be determined when the performance of flight manoeuvres, while giving flight instruction, meets the skill requirement for the issuance of the Commercial Pilot Licence; and for aerobatics when no major errors occur while performing the requisite aerobatic manoeuvres.
- (3) Assessment of "F", aeroplane and helicopter, will be made when the level of flight competency, while giving flight instruction, does not meet the skill requirement for the issuance of the Commercial Pilot Licence. For aerobatics, an "F" will be awarded when major errors occur while performing the requisite aerobatic manoeuvres.

14.5 Teaching Proficiency

- (1) The candidate will be required to teach the planned flight lesson, or an agreed-upon portion of it, with the examiner playing the role of the student. The examiner may terminate this phase of the test once an assessment of the candidate's competency has been determined.
- (2) In addition to the planned flight lesson, impromptu exercises will be requested by the examiner in order to obtain a broader sampling of teaching proficiency. These impromptu exercises are to be presented on the assumption that preparatory instruction and a pre-flight briefing have been completed. Exercises unrelated to the ones covered in the planned flight lesson will normally be requested.

14.6 Analysis of Student Performance

- (1) The examiner, while role-playing as a student with specified flight experience, will perform or describe various flight manoeuvres. The candidate is expected to assess this performance, analyze errors, and recommend appropriate corrective actions. This analysis may involve the manoeuvres in the planned flight lesson or the impromptu exercises.

14.7 Post-Flight Debriefing

- (1) The candidate is expected to present a post-flight debriefing, to the examiner, while in role-play, based on the tasks and manoeuvres performed during the flight. The candidate is expected to help the student assess his/her performance and make specific recommendations for improvement and answer any questions raised by the student. The candidate is expected to inform the student of strengths and

weaknesses and explain how to remedy the weaknesses. Assignment of home study material will show the instructor's familiarity with the contents of the Flight Training Manual and Flight Instructor Guide.

15.0 DOCUMENT HISTORY

- (1) Pilot Examiner Manual – Sixth Edition TP14277, RDIMS 11833613 (E), 12319611 (F) dated 2017-03-01.
- (2) Pilot Examiner Manual – Fifth Edition TP14277, RDIMS 10203429 (E), 9180317 (F) dated 2015-01-01.
- (3) Pilot Examiner Manual – Fourth Edition TP 14277, RDIMS 7184810 (E), 6820694 (F) dated 2012-11-26.
- (4) Pilot Examiner Manual – Third Edition TP 14277, RDIMS 4021152 (E), 5319832 (F) dated 2010-02-12.
- (5) Pilot Examiner Manual – Second Edition TP 14277, RDIMS 2480134 (E), 1126401 (F) dated 2007-07-20.
- (6) Pilot Examiner Manual – First Edition TP 14277, RDIMS 987018 (E), 938573 (F) dated 2004-11-26.

16.0 CONTACT OFFICE

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Suggestions for amendment to this document are invited and should be submitted via the e-mail above.

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