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| --- | --- | --- | --- | --- | --- |
| Flight no: | CPL(H) 34.\_\_\_ | Trainee name & ARN: |  | | |
| Date: |  | Instructor: |  | | |
| Aircraft registration: |  | Aircraft type: |  | Flight time: |  |

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| Lesson Overview  * Basic instrument flight * Introduction to limited panel technique * Recognition of and recovery from upset situations and unusual attitudes * Actions upon inadvertent entry into IMC |

| PRE-FLIGHT KNOWLEDGE  Long Briefing: 2.0 hours Pre-flight Briefing: 0.3 hour  Underpinning knowledge: as required | |
| --- | --- |
| Content | |
| **Long briefing** – Basic Instrument Flight   * Instrument panel layout * Instrument power sources * Instrument checks & serviceability * Sensory Illusions * Instrument scan techniques * Limited panel technique * Dangers associated with attempting VFR flight into deteriorating weather * Importance of proper pre-flight preparation and planning to avoid inadvertent entry into IMC * Actions upon inadvertent entry into IMC * Unusual attitudes – instrument indications, recovery techniques | |
| **Underpinning knowledge** (relevant to the stage of training):   * Review/expand previously introduced knowledge as required * Scan technique appropriate to fitted flight instruments and phase of flight [IFF(a),IFL(a)] * Attitude and power requirements to achieve specified flight profiles [IFF(b), IFL(b)] * Instrument failure and warning systems fitted to the helicopter [IFF(c),IFL(d)] * The safety risks associated with application of large or rapid control inputs in more than 1 axis simultaneously [IFL(e)] * Upset recovery techniques [H7(e)] | |
| **HF & NTS**   * Ensure VMC can be maintained * Look out for traffic. * Maintain situational awareness * Use correct handover /take over technique | |
| **Pre-flight briefing**   * Review flight sequences, what to expect, see & do * Check essential knowledge * Reinforce threat & error management * Reinforce significant airmanship points | |
| **Pre-flight knowledge components complete:** | **Instructor’s signature & date** |

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| Performance Standard | | |
| **3** | **2** | **1** |
| Has received training in the element, however is not able to consistently demonstrate competency to the standard required for qualification issue | Demonstrates a developing level of proficiency, and is deemed safe to conduct solo practice under direct supervision | Achieves competency to the standard required for qualification issue |

| FLIGHT TRAINING  Suggested flight time [1.2 hours dual] | | | |
| --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved\* |
| **C2.1** | **Pre-flight actions and procedures** |  |  |
| (a) | complete all required pre-flight administration documentation | 1 |  |
| (b) | obtain, interpret and apply information contained in the required pre-flight operational documentation, including the following: |  |  |
|  | (i) minimum equipment list (MEL) | 1 |  |
|  | (ii) maintenance release | 1 |  |
|  | (iii) weather forecasts | 1 |  |
|  | (iv) local observations | 1 |  |
|  | (v) Notice to Airmen (NOTAM) | 1 |  |
|  | (vi) global navigation satellite system (GNSS) receiver autonomous integrity monitoring (RAIM) information | 1 |  |
|  | (vii) En Route Supplement Australia (ERSA) | 1 |  |
|  | (viii) Aeronautical Information Package (AIP) | 1 |  |
| (c) | identify special aerodrome procedures | 1 |  |
| (d) | identify all relevant radio and navigation aid facilities to be used during the flight (if applicable) | 1 |  |
| (e) | determine the suitability of the current and forecast weather conditions for the proposed flight | 1 |  |
| (f) | using the aircraft documents, calculate the following for a given set of environmental and operational conditions: |  |  |
|  | (i) weight and balance | 1 |  |
|  | (ii) in-ground and out-of-effect hover performance | 1 |  |
|  | (iii) take-off and landing performance | 1 |  |
|  | (iv) fuel requirements | 1 |  |
| (g) | determine whether the aircraft is serviceable for the proposed flight | 1 |  |
| **C2.2** | **Perform pre-flight inspection** |  |  |
| (a) | identify and secure equipment and documentation that is required for the flight | 1 |  |
| (b) | complete an internal and external check of the aircraft | 1 |  |
| (c) | identify all defects or damage to the aircraft | 1 |  |
| (d) | report to, and seek advice from, qualified personnel to determine the action required in relation to any identified defects or damage | 1 |  |
| (e) | ensure all aircraft locking and securing devices, covers and bungs are removed and stowed securely | 1 |  |
| (f) | certify the aircraft flight technical log entering any defects or endorsements to permissible unserviceabilities as appropriate | 1 |  |
| (g) | complete and certify the daily inspection (if authorised to do so) | 1 |  |
| **C2.3** | **Post-flight actions and procedures** |  |  |
| (a) | shut down aircraft | 1 |  |
| (b) | conduct post-flight inspection and secure the aircraft (if applicable) | 1 |  |
| (c) | complete all required post-flight administration documentation | 1 |  |
| **C3.2** | **Manage R/T equipment malfunctions** |  |  |
| (a) | perform radio failure procedures | 1 |  |
| (b) | use fault finding procedures and perform corrective actions | 1 |  |
| **C3.3** | **Operate Transponder** |  |  |
| (a) | operate a transponder during normal, abnormal and emergency operations | 1 |  |
| (b) | recall transponder emergency codes | 1 |  |
| **C4.2** | **Manage fuel system** |  |  |
| (a) | verify fuel quantity on-board aircraft prior to flight using two independent methods | 1 |  |
| (b) | ensure the fuel caps are secured | 1 |  |
| (c) | perform fuel quality check prior to flight | 1 |  |
| (d) | ensure fuel drain cocks are closed | 1 |  |
| (e) | monitor fuel usage during the flight | 1 |  |
| (f) | accurately maintain fuel log | 1 |  |
| (g) | calculate and state endurance at any point during flight | 1 |  |
| (h) | perform fuel tank changes correctly | 1 |  |
| (i) | maintain fuel load within aircraft limits | 1 |  |
| (j) | operate the fuel cross-feed system correctly (if fitted) | 1 |  |
| (k) | operate fuel pumps and engine controls correctly | 1 |  |
| (m) | configure the aircraft correctly to achieve best endurance performance and correctly calculate the revised operational endurance | 1 |  |
| **C4.3** | **Refuel aircraft** |  |  |
| (a) | identify the correct type of fuel to be used | 1 |  |
| (b) | ensure aircraft is earthed prior to refuelling and defueling operations | 1 |  |
| (c) | correctly load and unload fuel | 1 |  |
| (d) | ensure required fuel quantity is loaded | 1 |  |
| (e) | ensure fuel caps are closed and secured after fuelling operations | 1 |  |
| (f) | perform fuel quality checks | 1 |  |
| **H5.2** | **Maintain straight and level flight** |  |  |
| (a) | adjust attitude and power to achieve a constant height, heading and speed while remaining in balanced flight | 1 |  |
| (b) | lookout is maintained using a systematic scan technique at a rate determined by traffic density, visibility or terrain | 1 |  |
| (c) | natural horizon is used as primary attitude reference | 1 |  |
| (d) | nominated altitude is maintained | 1 |  |
| **H5.7** | **Comply with airspace requirements** |  |  |
| (a) | suitable aeronautical charts are interpreted and used to maintain airspace compliance requirements | 1 |  |
| (b) | circuit departure is performed | 1 |  |
| (c) | helicopter is maintained within a specified area and/or track while complying with air traffic requirements, controlled or restricted airspace conditions or limitations and reacting to factors that affect the safe progress of a flight | 1 |  |
| (d) | orientation is maintained to geographical features with the aid of suitable charts and maps | 1 |  |
| (e) | circuit join is conducted | 1 |  |
| **IFF.1** | **Determine and monitor the serviceability of flight instruments and instrument power sources** |  |  |
| (a) | determine serviceability of flight and navigational instruments | 3 |  |
| (b) | perform functional checks of flight and navigational instruments where applicable prior to take-off | 3 |  |
| (c) | monitor flight instrument and instrument power sources and react to any warnings, unserviceability or erroneous indications | 3 |  |
| **IFF.2** | **Perform manoeuvres using full instrument panel** |  |  |
| (a) | interpret flight instrument indications and apply procedures and techniques to achieve and maintain a specified flight path using the aircraft's full instrument panel | 3 |  |
| (b) | set and maintain power and attitude by reference to the full instrument panel to achieve the following: |  |  |
|  | (i) straight and level performance during normal cruise within the flight tolerances | 3 |  |
|  | (ii) nominated climb performance within the flight tolerance | 3 |  |
|  | (iii) descent performance within the flight tolerances | 3 |  |
| (c) | set and maintain power and attitude by reference to the full instrument panel to establish a rate 1 turn onto a nominated heading within the flight tolerances | 3 |  |
| **IFF.3** | **Recover from upset situations and unusual attitudes** |  |  |
| (a) | correctly identify upset situations and unusual attitudes under simulated IMC | 3 |  |
| (b) | recover to controlled flight from upset situations and unusual attitudes under simulated IMC from any combination of the following aircraft states: |  |  |
|  | (i) high and low-nose attitudes | 3 |  |
|  | (ii) varying angles of bank | 3 |  |
|  | (iii) various power settings | 3 |  |
|  | (iv) various aircraft configurations | 3 |  |
|  | (v) unbalanced flight | 3 |  |
| **IFL.1** | **Recognise failure of attitude indicator and stabilised heading indicator** |  |  |
| (a) | monitor flight instruments and instrument power sources and recognise warning indicators or erroneous instrument indications | 3 |  |
| (b) | transition from a full instrument panel to a limited instrument panel | 3 |  |
| **IFL.2** | **Perform manoeuvres - limited panel** |  |  |
| (a) | interpret and respond appropriately to instrument indications | 3 |  |
| (b) | apply power and attitude settings to achieve straight and level performance during: |  |  |
|  | (i) normal cruise | 3 |  |
|  | (ii) in a helicopter - at minimum power for level flight speed | 3 |  |
| (c) | apply power and attitude settings to achieve: |  |  |
|  | (i)  nominated climb performance | 3 |  |
|  | (ii)  nominated descent performance | 3 |  |
|  | (iii)  during climb, descent and straight and level flight, rate 1 turns onto a nominated heading | 3 |  |
| (d) | balance aircraft | 3 |  |
| (e) | establish level flight at a nominated altitude, from a climb or descent during straight or turning flight | 3 |  |
| **IFL.3** | **Recover from upset situations and unusual attitudes - limited panel** |  |  |
| (a) | correctly identify upset situations and unusual attitudes under simulated IMC | 3 |  |
| (b) | recover to stabilised straight and level flight using approved techniques from upset situations and unusual attitudes under simulated IMC from any combination of the following aircraft states: |  |  |
|  | (i) high and low-nose attitudes | 3 |  |
|  | (ii) varying angles of bank | 3 |  |
|  | (iii) various power settings | 3 |  |
|  | (iv) various aircraft configurations | 3 |  |
|  | (v) unbalanced flight | 3 |  |
| **IFL.4** | **Re-establish visual flight** |  |  |
| (a) | transition from visual flight conditions to instrument flight conditions while maintaining control of the aircraft | 3 |  |
| (b) | perform a manoeuvre to re-establish visual flight | 3 |  |
| (c) | implement a plan that ensures the flight continues in VMC | 3 |  |

\*Enter the performance standard achieved if it is different to that required

Where it has not been possible to introduce performance criteria or the trainee has not achieved the required standard, the performance criteria must be covered during the next lesson. Enter these performance criteria in the lesson record for the subsequent lesson.

| CONSOLIDATION AND/OR REMEDIAL TRAINING | | | |
| --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved |
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| DEBRIEFING |
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| Content |
| * Training review and outcomes achieved against lesson objectives and the Part 61 MOS competency standards * Recommendations for next lesson (including any carryover/remedial training) * Trainee preparation for next lesson * Training record completion and sign off |

| COMMENTS AND OUTCOME | | |
| --- | --- | --- |
|  | | |
| **Proceed to next training session?** | **Yes** | **No** |

| Instructor’s signature & date | Trainee’s signature & date |
| --- | --- |
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