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| Flight no: | RPL(A)17.\_\_\_\_ | Trainee name & ARN: |  | | |
| Date: |  | Instructor: |  | | |
| Aircraft registration: |  | Aircraft type: |  | Flight time: |  |

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| Lesson Overview  * Weight and balance, take-off and landing performance calculations, fuel calculations * Refuelling * Practice forced landings (simulated complete and partial engine failure conditions) * Manage other simulated abnormal situations * Passenger management (simulated) * **Assess:**   + engine start and shutdown malfunctions and emergencies   + climbing (cruise and best rate)   + descending (cruise descent) |

| PRE-FLIGHT KNOWLEDGE  Long Briefing: 0.8 hour Pre-flight Briefing: 0.3 hour  Underpinning knowledge: as required | |
| --- | --- |
| Content | |
| **Long briefing** – Practice Forced Landings   * Common engine failure causes (partial and complete engine failures) * Immediate/vital actions (including initial trouble checks) * Wind indicators and assessment * Landing area selection * Planning and flying the approach, actions if high or low * Detailed trouble checks * Radio procedures (MAYDAY call) * Passenger briefing and management * Final approach judgement, recognition and management of over/undershoot * Shutdown checks * Engine management considerations during simulated engine failures | |
| **Underpinning knowledge**   * Review/expand previously introduced knowledge as required * Variations to planned fuel consumption [C4 4(h)] * Managing passengers during abnormal or emergency situations [C5 4(a)] * Local procedures for movement of passengers [C5 4(b)], Security requirements [C5 4(c)] * Dangerous goods awareness [C5 4(d)], Health and safety regulations and best practice [C5 4(e)] * Take-off distance required calculation [A2 4(d)], Aerodrome charts [A2 4(e)] * Local topographical charts- identify safe areas for engine-failure purposes, noise-abatement considerations [A2 4(f)] * Aircraft weight & balance and how to calculate centre of gravity [A1 4(f), A3 4(f) & A4 4(d)] * Engine failure scenarios and procedures for partial and complete power loss [A6 4(a)] * Forced landing scenarios and procedures [A6 4(b)], Judging descent profiles in various configurations [A6 4(d)] * Prioritising activities during emergencies and non-normal situations [A6 4(e)] * Ditching [A6 4(f)] * Suitable fields for forced landings [A6 4(g)] * Considerations when practising emergencies and non-normal operations [A6 4(h)] * Aircraft performance in a glide (straight & turning) [A6 4(i)] * Effects of partial engine power on performance, flight profile, range and landing options [A6 4(k)] * Passenger control and briefing [A6 4(m)] * Low-flying hazards[A6 4(o)] | |
| **HF & NTS**   * Effective communication under normal and non-normal circumstances [NTS1 4(a), NTS2 4(a)] * Threat and error management detailing processes that can be used to identify and mitigate or control threats and errors [NTS2 4(b)] * Task management [NTS2 4(I)], including:   + workload organisation and priority setting to ensure optimum safe outcome of the flight   + event planning to occur in a logical and sequential manner   + anticipating events to ensure sufficient opportunity is available for completion   + using technology to reduce workload and improve cognitive and manipulative activities   + task prioritisation and protection whilst filtering and managing real time information * Aviate, Navigate, Communicate * Undesired aeroplane state – prevention, identifying, controlling [NTS2 4(e)] * How an undesired aeroplane state can develop from unmanaged threat or error [NTS2 4(f)] * Use of checklists and standard operating procedures to prevent errors [NTS2 4(h)] | |
| **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: 1.0 hour dual | | | |
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| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved\* |
| 1. C2.1 | Pre-flight actions and procedures |  |  |
|  | using the aircraft documents, calculate the following for a given set of environmental and operational conditions: |  |  |
|  | * + 1. weight and balance | 3 |  |
|  | * + 1. take-off and landing performance | 3 |  |
|  | * + 1. fuel requirements | 3 |  |
| 1. C4.1 | Plan fuel requirements |  |  |
|  | determine the quantity of fuel required taking into account operational requirements and relevant abnormal or emergency conditions and contingencies | 3 |  |
| 1. C4.3 | Refuel aircraft | 3 |  |
| 1. A1.1 | Start and stop engine |  |  |
|  | manage engine start and shutdown malfunctions and emergencies  (e.g. flooded start, engine fire on start up, engine fire on shutdown) | **2** |  |
| 1. A1.2 | Taxi aeroplane |  |  |
|  | use aerodrome or landing area charts to taxi aircraft | 3 |  |
|  | perform applicable taxi checks, including the following: |  |  |
|  | * + 1. instruments for correct readings | 3 |  |
| 1. A3.1 | Climb aeroplane |  |  |
|  | for the following climbing manoeuvres select power, attitude and configuration as required for the flight path, balance and trim the aeroplane accurately, and apply smooth, coordinated control inputs to achieve the required flight tolerances that apply to the manoeuvre: |  |  |
|  | * + 1. cruise climb | **2** |  |
|  | * + 1. best rate climb | **2** |  |
| 1. A3.3 | Descend aeroplane |  |  |
|  | for the following descending manoeuvres select power, attitude and configuration as required for the flight path, balance and trim the aeroplane accurately, and apply smooth, coordinated control inputs to achieve the required flight tolerances that apply to the manoeuvre: |  |  |
|  | * + 1. powered | **2** |  |
|  | anticipate level-off altitude and achieve straight and level flight | **2** |  |
| 1. C3.3 | Operate transponder |  |  |
|  | operate a transponder during abnormal and emergency operations | **2** |  |
|  | recall transponder emergency codes | **2** |  |
| 1. A6.3 | Perform forced landing (simulated) |  |  |
|  | after a simulated complete engine failure has occurred, without prior indications, carry out the following: |  |  |
|  | * + 1. identify complete power failure condition and control aeroplane | 3 |  |
|  | * + 1. perform immediate actions | 3 |  |
|  | * + 1. formulate and describe a recovery plan, including selecting the most suitable landing area | 3 |  |
|  | * + 1. establish optimal gliding flight path to position the aeroplane for a landing on the selected landing area | 3 |  |
|  | * + 1. perform emergency procedures and land the aeroplane if the engine cannot be restarted as time permits | 3 |  |
|  | * + 1. advise ATS or other agencies capable of providing assistance of situation and intentions | 3 |  |
|  | * + 1. re-brief passengers about flight situation, brace position and harness security | 3 |  |
|  | * + 1. land the aeroplane ensuring safest outcome if an engine restart is not achieved | 3 |  |
|  | after a simulated partial engine failure has occurred, without prior indications, carry out the following: |  |  |
|  | * + 1. identify partial power failure condition | 3 |  |
|  | * + 1. perform recall actions | 3 |  |
|  | * + 1. adjust flight controls to re-establish flight path that maximises performance for partial power condition and maintain a safe airspeed margin above stall speed | 3 |  |
|  | * + 1. establish radio communications where possible | 3 |  |
|  | * + 1. perform partial engine failure actions | 3 |  |
|  | * + 1. formulate a plan to recover aeroplane to a safe landing area or aerodrome, taking into account that partial failure might lead to a full power failure at any time | 3 |  |
|  | * + 1. manoeuvre the aeroplane to a selected landing area or aerodrome using the remaining power to establish an optimal aircraft position for a safe landing | 3 |  |
|  | * + 1. advise ATS or other agencies capable of providing assistance of situation and intentions | 3 |  |
|  | * + 1. re-brief passengers about flight situation, brace position and harness security | 3 |  |
|  | * + 1. maintain a contingency plan for coping with a full power failure throughout the manoeuvre | 3 |  |
|  | * + 1. when a safe landing position is established, shut down and secure engine and aeroplane | 3 |  |
| 1. A6.5 | Manage other abnormal situations (simulated) (e.g. simulated engine fire in flight) |  |  |
|  | correctly identify the situation and maintain safe control of the aeroplane at all times | 3 |  |
|  | manage abnormal and emergency situations in accordance with relevant emergency procedures and regulatory requirements | 3 |  |
|  | follow appropriate emergency procedures while maintaining control of the aeroplane | 3 |  |
|  | correctly identify when an emergency evacuation of an aeroplane is required | 3 |  |
|  | execute a simulated emergency evacuation of an aeroplane | 3 |  |
|  | advise ATS or other agencies capable of providing assistance of situation and intentions | 3 |  |
| 1. C4.2 | Manage fuel system |  |  |
|  | operate the fuel cross-feed system correctly (if fitted) | 3 |  |
| 1. C5.1 | Manage passengers |  |  |
|  | supervise passenger safety | 3 |  |
|  | encourage passengers to participate in and contribute to the safe outcome of the flight | 3 |  |
|  | conduct pre-flight passenger safety briefing | 3 |  |
|  | ensure passengers are aware of, and avoid interference with, flight and systems controls | 3 |  |
|  | ensure passengers are aware of, and comply with, the use of seat harnesses | 3 |  |
|  | ensure passengers are aware of the use of escape hatches, exits and emergency equipment on board the aircraft | 3 |  |
|  | manage passenger safety in the event of abnormal or in-flight emergency situations | 3 |  |
| 1. C5.2 | Aid and assist passengers |  |  |
|  | establish and maintain clear communications with passengers | 3 |  |
|  | assist with passenger comfort both when airside and in flight | 3 |  |
| 1. NTS1.4 | Set priorities and manage tasks |  |  |
|  | use technology to reduce workload and improve cognitive and manipulative activities | 3 |  |
| 1. NTS1.5 | Maintain effective communications and interpersonal relationships |  |  |
|  | establish and maintain effective and efficient communications and interpersonal relationships with all stakeholders to ensure the optimum outcome of the flight | 3 |  |
|  | define and explain objectives to stakeholders | 3 |  |
|  | demonstrate a level of assertiveness that ensures the optimum completion of the flight | 3 |  |
| 1. NTS2.2 | Recognise and manage errors |  |  |
|  | monitor the following to collect and analyse information to identify potential or actual errors: |  |  |
|  | * + 1. aircraft systems using a systematic scan technique | 3 |  |
|  | * + 1. the flight environment | 3 |  |
|  | * + 1. other crew | 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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