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| --- | --- | --- | --- | --- | --- |
| Flight no: | RPL(A)9.\_\_\_\_ | Trainee name & ARN: |  | | |
| Date: |  | Instructor: |  | | |
| Aircraft registration: |  | Aircraft type: |  | Flight time: |  |

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| Lesson Overview  * Recognition of take-off abnormalities, rejected take-off * Simulated engine failure after take-off * Simulated engine failure in the circuit * Glide approach and landing * **Assess:**   + operational communication using an aeronautical radio, operate radio equipment and transponder   + pre-flight actions and procedures, perform pre-flight inspection   + plan fuel requirements, manage fuel system   + start and stop engine, taxi aeroplane   + pre-take-off procedures, take-off, after take-off procedures   + climbing, descending, turning   + circuits and landings, including missed approach and missed landing recovery   + simulated engine failure on take-off and within the circuit area   + situational awareness, assess situations and make decisions, set priorities and manage tasks, recognise and manage threats, recognise and manage errors, recognise and manage undesired aircraft state |

| PRE-FLIGHT KNOWLEDGE  Long Briefing: 0.8 hour Pre-flight Briefing: 0.3 hour  Underpinning knowledge: as required | |
| --- | --- |
| Content | |
| **Long briefing** – Circuit Emergencies   * Engine failure causes and prevention * Engine failure during take-off * Engine failure after take-off * Engine failure in the circuit * Vital actions and priorities * Landing area selection * Selection of aiming point * Factors affecting glide performance * Judgement and correction of overshoot/undershoot * Glide approach and landing | |
| **Underpinning knowledge**   * Review/expand previously introduced knowledge as required * Judging descent profiles in various configurations [A6 4(d)], Aircraft performance in a glide [A6 4(i)] * Prioritising activities during emergencies [A6 4(e)] * Suitable fields for forced landings and precautionary landings [A6 4(g)] | |
| **HF & NTS**   * Effective communication under non-normal circumstances [NTS1 4(a)] * Developing and implementing plans of action to remove and mitigate threats & errors [NTS2 4(d)] | |
| **Pre-flight briefing**   * Review flight sequences, what to expect, see & do * Check essential knowledge * Reinforce threat & error management * Reinforce significant airmanship points | |
| * Schedule pre-solo examination * Schedule general English language proficiency assessment (if applicable – refer CASR 141.306) | |
| **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 | | | |
| --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | Performance  Standard | |
| Required | Achieved\* |
| 1. C1.2 | Operational communication using an aeronautical radio |  |  |
|  | maintain effective communication with others on operational matters | **2** |  |
|  | apply the phonetic alphabet | **2** |  |
|  | transmit numbers | **2** |  |
|  | make appropriate transmissions using standard aviation phraseology | **2** |  |
|  | use plain English effectively when standard phraseology is inadequate | **2** |  |
|  | receive appropriate responses to transmissions | **2** |  |
|  | respond to transmissions and take appropriate action | **2** |  |
|  | recognise and manage communication errors and misunderstandings effectively | **2** |  |
|  | seek clarification in the time available if a message is unclear or uncertainty exists | **2** |  |
|  | react appropriately to a variety of regional accents | **2** |  |
| 1. C2.1 | Pre-flight actions and procedures |  |  |
|  | complete all required pre-flight administration documentation | **2** |  |
|  | obtain, interpret and apply information contained in the required pre-flight operational documentation, including the following: |  |  |
|  | * + 1. maintenance release | **2** |  |
|  | identify special aerodrome procedures | **2** |  |
|  | determine the suitability of the current weather conditions for the proposed flight | **2** |  |
|  | determine whether the aircraft is serviceable for the proposed flight | **2** |  |
| 1. C2.2 | Perform pre-flight inspection |  |  |
|  | identify and secure equipment and documentation that is required for the flight | **2** |  |
|  | complete an internal and external check of the aircraft | **2** |  |
|  | identify all defects or damage to the aircraft | **2** |  |
|  | ensure all aircraft locking and securing devices, covers and bungs are removed and stowed securely | **2** |  |
| 1. C4.1 | Plan fuel requirements |  |  |
|  | determine the required fuel reserves | **2** |  |
|  | determine the total fuel required for the flight | **2** |  |
| 1. C4.2 | Manage fuel system |  |  |
|  | verify fuel quantity on-board aircraft prior to flight using two independent methods | **2** |  |
|  | ensure the fuel caps are secured | **2** |  |
|  | perform fuel quality check prior to flight | **2** |  |
|  | ensure fuel drain cocks are closed | **2** |  |
|  | monitor fuel usage during the flight | **2** |  |
|  | perform fuel tank changes correctly | **2** |  |
|  | maintain fuel load within aircraft limits | **2** |  |
|  | operate fuel pumps and engine controls correctly | **2** |  |
| 1. A1.1 | Start and stop engine |  |  |
|  | perform engine start and after start actions | **2** |  |
|  | perform engine shutdown and after shutdown actions | **2** |  |
|  | manage engine start and shutdown malfunctions and emergencies  (e.g. simulated engine fire on startup and shutdown) | 3 |  |
|  | considers ground surface in relation to contamination and propeller care during engine start and stop activities | **2** |  |
| 1. A1.2 | Taxi aeroplane |  |  |
|  | comply with taxiway and other aerodrome markings, right-of-way rules and ATC or marshalling instructions when applicable | **2** |  |
|  | perform applicable taxi checks, including the following: |  |  |
|  | * + 1. brakes and steering function normally and take appropriate action in the event of a malfunction | **2** |  |
|  | * + 1. altimeter setting | **2** |  |
|  | maintain safe taxi speed and control of the aircraft | **2** |  |
|  | maintain safe spacing from other aircraft, obstructions, and persons | **2** |  |
|  | taxi the aeroplane along the centre of the taxiway | **2** |  |
|  | avoid causing a hazard to other aircraft, objects or persons | **2** |  |
|  | correct handling techniques are applied to take into account wind from all four quadrants | **2** |  |
|  | correctly manage the engine during taxi manoeuvres | **2** |  |
| 1. A2.1 | Carry out pre take-off procedures |  |  |
|  | correctly identify critical airspeeds, configurations, and emergency and abnormal procedures for normal and crosswind take-offs | **2** |  |
|  | work out a plan of action, in advance, to ensure the safest outcome in the event of abnormal operations | **2** |  |
|  | verify and correctly apply correction for the existing wind component to the take-off performance | **2** |  |
|  | perform all pre take-off and line-up checks required by the aircraft checklist | **2** |  |
|  | ensure approach path is clear of conflicting traffic and other hazards before lining up for take-off | **2** |  |
|  | align the aeroplane on the runway centreline | **2** |  |
| 1. A2.2 | Take off aeroplane |  |  |
|  | apply the controls correctly to maintain longitudinal alignment on the centreline of the runway, if appropriate, prior to initiating and during the take-off | **2** |  |
|  | adjust the power controls taking into account the existing conditions | **2** |  |
|  | monitor power controls, settings, and instruments during take-off to ensure all predetermined parameters are achieved and maintained | **2** |  |
|  | adjust the controls to attain the desired pitch attitude at the predetermined airspeed to attain the desired performance | **2** |  |
|  | perform the take-off applying the required pitch, roll and yaw inputs as appropriate in a smooth, coordinated manner | **2** |  |
|  | trim the aeroplane accurately | **2** |  |
|  | perform gear and flap retractions, power adjustments (as applicable) and other required pilot-related activities | **2** |  |
|  | maintain flight path along the runway extended centreline | **2** |  |
|  | apply the applicable noise abatement and wake turbulence avoidance procedures | **2** |  |
|  | recognise take-off abnormalities and take appropriate action to reject take-off (can be simulated) | **2** |  |
| 1. A2.4 | Carry out after take-off procedures |  |  |
|  | perform after take-off checklist | **2** |  |
|  | maintain the appropriate climb segment at the nominated heading and airspeed | **2** |  |
|  | manoeuvre according to local and standard procedures | **2** |  |
|  | maintain traffic separation | **2** |  |
| 1. A6.1 | Manage engine failure - take-off (simulated) |  |  |
|  | correctly identify an engine failure after take-off | **2** |  |
|  | apply the highest priority to taking action to control the aeroplane | **2** |  |
|  | maintain control of the aeroplane | **2** |  |
|  | perform recall actions | **2** |  |
|  | perform emergency actions as far as time permits | **2** |  |
|  | manoeuvre the aeroplane to achieve the safest possible outcome | **2** |  |
|  | advise others such as ATS and other aircraft of intentions if time permits | **2** |  |
| 1. A3.1 | Climb aeroplane |  |  |
|  | operate and monitor all aircraft systems when commencing, during, and completing a climbing flight manoeuvre | **2** |  |
|  | identify and avoid terrain and traffic | **2** |  |
|  | anticipate level-off altitude and achieve straight and level flight | **2** |  |
| 1. A3.3 | Descend aeroplane |  |  |
|  | operate and monitor all aircraft systems during descending flight manoeuvres | **2** |  |
|  | 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. glide | **2** |  |
|  | * + 1. approach configuration descent (flap and undercarriage) | **2** |  |
| 1. A3.4 | Turn aeroplane |  |  |
|  | operate and monitor all aircraft systems during turning flight manoeuvres | **2** |  |
|  | for the following turning 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. level turns | **2** |  |
|  | * + 1. climbing turns | **2** |  |
|  | * + 1. powered descending turns | **2** |  |
|  | * + 1. gliding descending turns | **2** |  |
|  | complete turn manoeuvre on a nominated heading or geographical feature | **2** |  |
|  | turn aeroplane at varying rates to achieve specified tracks | **2** |  |
|  | manoeuvre aeroplane over specified tracks or geographical features | **2** |  |
| 1. A3.6 | Perform circuits and approaches |  |  |
|  | operate and monitor all aircraft systems when operating the aeroplane in the circuit | **2** |  |
|  | in accordance with specific local procedures, safely perform a full circuit pattern (5 legs) by balancing and trimming the aeroplane accurately while applying smooth, coordinated control inputs to achieve the required flight tolerances specified for the flight path flown during traffic pattern manoeuvres as follows: |  |  |
|  | * + 1. track upwind along extended centreline to 500 ft | **2** |  |
|  | * + 1. establish and maintain crosswind leg tracking 90° to the runway | **2** |  |
|  | * + 1. establish and maintain downwind leg tracking parallel to, and at a specified distance from, the runway at circuit height | **2** |  |
|  | * + 1. establish base leg tracking 90° to the runway at a specified distance from the runway threshold | **2** |  |
|  | perform checks as required throughout circuit | **2** |  |
|  | establish the approach and landing configuration appropriate for the runway and meteorological conditions, and adjust the power plant controls as required for the following: |  |  |
|  | * + 1. commence and control approach descent path | **2** |  |
|  | * + 1. adjust descent commencement point to take account of extended downwind leg or traffic adjustments | **2** |  |
|  | * + 1. align and maintain aircraft on final approach flight path with specified or appropriate runway | **2** |  |
|  | * + 1. set and maintain approach configuration not below 500 ft AGL | **2** |  |
|  | * + 1. identify and maintain the nominated aiming point | **2** |  |
|  | * + 1. maintain a stabilised approach angle at the nominated airspeed not less than 1.3Vs to the round-out height | **2** |  |
|  | * + 1. verify existing wind conditions, make proper correction for drift, and maintain a precise ground track | **2** |  |
|  | * + 1. apply speed allowances for wind gusts | **2** |  |
|  | * + 1. configure aeroplane for landing | **2** |  |
|  | maintain aircraft separation and position in the circuit with reference to other aircraft traffic in the circuit area | **2** |  |
| 1. C3.1 | Operate radio equipment |  |  |
|  | confirm serviceability of radio equipment | **2** |  |
|  | conduct transmission and receipt of radio communications using appropriate procedures and phraseology | **2** |  |
|  | maintain a listening watch and respond appropriately to applicable transmissions | **2** |  |
|  | conduct appropriate emergency and urgency transmissions | **2** |  |
| 1. C3.3 | Operate transponder |  |  |
|  | operate a transponder during normal operations | **2** |  |
| 1. A6.2 | Manage engine failure in the circuit area (simulated) |  |  |
|  | correctly identify an engine failure during flight | **2** |  |
|  | apply the highest priority to taking action to control the aeroplane | **2** |  |
|  | perform recall actions | **2** |  |
|  | select a suitable landing area within gliding distance, on the aerodrome or elsewhere | **2** |  |
|  | perform emergency procedures and land the aeroplane if the engine cannot be restarted as time permits | **2** |  |
|  | advise ATS or other agencies capable of providing assistance of situation and intentions | **2** |  |
|  | land the aeroplane ensuring safest outcome if an engine restart is not achieved | **2** |  |
| 1. NTS1.2 | Maintain situational awareness |  |  |
|  | monitor all aircraft systems using a systematic scan technique | **2** |  |
|  | collect information to facilitate ongoing system management | **2** |  |
|  | monitor flight environment for deviations from planned operations | **2** |  |
|  | collect flight environment information to update planned operations | **2** |  |
| 1. NTS1.3 | Assess situations and make decisions |  |  |
|  | identify problems | **2** |  |
|  | analyse problems | **2** |  |
|  | identify solutions | **2** |  |
|  | assess solutions and risks | **2** |  |
|  | decide on a course of action | **2** |  |
|  | communicate plans of action (if appropriate) | **2** |  |
|  | allocate tasks for action (if appropriate) | **2** |  |
|  | take actions to achieve optimum outcomes for the operation | **2** |  |
|  | monitor progress against plan | **2** |  |
|  | re-evaluate plan to achieve optimum outcomes | **2** |  |
| 1. NTS1.4 | Set priorities and manage tasks |  |  |
|  | organise workload and priorities to ensure optimum outcome of the flight | **2** |  |
|  | plan events and tasks to occur sequentially | **2** |  |
|  | anticipate events and tasks to ensure sufficient opportunity for completion | **2** |  |
| 1. NTS2.1 | Recognise and manage threats |  |  |
|  | identify relevant environmental or operational threats that are likely to affect the safety of the flight | **2** |  |
|  | identify when competing priorities and demands may represent a threat to the safety of the flight | **2** |  |
|  | develop and implement countermeasures to manage threats | **2** |  |
|  | monitor and assess flight progress to ensure a safe outcome, or modify actions when a safe outcome is not assured | **2** |  |
| 1. NTS2.2 | Recognise and manage errors |  |  |
|  | apply checklists and standard operating procedures to prevent aircraft handling, procedural or communication errors | **2** |  |
|  | identify committed errors before safety is affected or the aircraft enters an undesired state | **2** |  |
|  | implement countermeasures to prevent errors or take action in the time available to correct errors before the aircraft enters an undesired state | **2** |  |
| 1. NTS2.3 | Recognise and manage undesired aircraft state |  |  |
|  | recognise an undesired aircraft state | **2** |  |
|  | prioritise tasks to ensure an undesired aircraft state is managed effectively | **2** |  |
|  | apply corrective actions to recover an undesired aircraft state in a safe and timely manner | **2** |  |
| 1. A4.3 | Conduct a missed approach |  |  |
|  | recognise the conditions when a missed approach should be executed | **2** |  |
|  | make the decision to execute a missed approach when it is safe to do so | **2** |  |
|  | make a smooth, positively-controlled transition from approach to missed approach, including the following: |  |  |
|  | * + 1. select power, attitude and configuration to safely control aeroplane | **2** |  |
|  | * + 1. manoeuvre aeroplane clear of the ground and conduct after take-off procedures | **2** |  |
|  | * + 1. make allowance for wind velocity during go-around | **2** |  |
|  | * + 1. avoid wake turbulence | **2** |  |
| 1. A4.4 | Perform recovery from missed landing |  |  |
|  | recognise when a missed landing is occurring and when it is appropriate to take recovery action | **2** |  |
|  | make the decision to execute recovery from a missed landing only when it is safe to do so | **2** |  |
|  | make a smooth, positively-controlled transition from a missed landing to missed approach, including the following: |  |  |
|  | * + 1. select power, attitude and configuration to safely control aeroplane | **2** |  |
|  | * + 1. manoeuvre aeroplane clear of the ground and conduct after take-off procedures | **2** |  |
|  | * + 1. make allowance for wind velocity during go-around | **2** |  |
|  | * + 1. avoid wake turbulence | **2** |  |
| 1. A4.1 | Land aeroplane |  |  |
|  | maintain a constant landing position aim point | **2** |  |
|  | achieve a smooth, positively-controlled transition from final approach to touchdown, including the following: |  |  |
|  | * + 1. control ballooning during flare | **2** |  |
|  | * + 1. touchdown at a controlled rate of descent, in the specified touchdown zone within tolerances | **2** |  |
|  | * + 1. control bouncing after touchdown | **2** |  |
|  | * + 1. touch down aligned with the centreline within tolerances | **2** |  |
|  | ensure separation is maintained | **2** |  |
|  | maintain positive directional control and crosswind correction during the after-landing roll | **2** |  |
|  | use drag and braking devices, as applicable, in such a manner to bring the aeroplane to a safe stop | **2** |  |
|  | complete the applicable after-landing checklist items in a timely manner | **2** |  |

\*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 |
| --- |
| 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 |
| --- | --- |
|  |  |