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| --- | --- | --- | --- | --- | --- |
| Flight no: | NVFR(A)7.\_\_\_\_ | Trainee name & ARN: |  | | |
| Date: |  | Instructor: |  | | |
| Aircraft registration: |  | Aircraft type: |  | Flight time: |  |

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| Lesson Overview  * VMC by day - recover from upset situations and unusual attitudes during simulated instrument flight * Night navigation route: [Enter navigation route] * Circuits and full stop landing at [enter location] * Revise instrument flight * Diversion * **Assess** all performance criteria * Flight manoeuvres to be performed within the flight tolerances mentioned in Table 1, Schedule 8 of the Part 61 MOS |

| PRE-FLIGHT KNOWLEDGE  Long Briefing: as required Pre-flight Briefing: 0.3 hour  Underpinning knowledge: as required | |
| --- | --- |
| Content | |
| **Long briefing** – Revision as required | |
| **Underpinning knowledge**   * Review previously introduced underpinning knowledge as required * Flight test knowledge requirements:   + the principles and limitations of the night VFR rating and the night VFR endorsement that is covered by the flight test   + flight review requirements   + night recency requirements   + NVFR operations   + interpreting operational and meteorological information   + ground and aircraft lighting requirements   + night VFR planning   + use of instrument and navigation systems   + take-off minima   + holding and alternate requirements   + night VFR procedures for all airspace classifications   + departure and approach procedures   + operations below LSALT and MSA for day and night operations   + hazardous weather and conditions   + GNSS   + ERSA normal and emergency procedures | |
| **HF & NTS**   * Review previously introduced HF & NTS knowledge and considerations | |
| **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: 2.9 hours dual (0.4 day, 2.5 night) (0.3 IF) | | | | |
| --- | --- | --- | --- | --- |
| MOS Reference | Lesson Content (Elements & Performance Criteria) | | Performance  Standard | |
| Required | Achieved\* |
| 1. NVR1.1 | Control aircraft on the ground at night | |  |  |
|  | instrument and cockpit lighting are adjusted to an appropriate level for taxiing | | **1** |  |
|  | ATC instructions and manoeuvres of the aircraft on the ground at night within the approved movement area as defined by aerodrome ground lighting are complied with | | **1** |  |
|  | aircraft lighting to identify obstructions, other aircraft and taxiway and runway limits is used as required | | **1** |  |
|  | aircraft is taxied at a speed which allows for an adequate lookout to be maintained to avoid obstructions | | **1** |  |
| 1. NVR1.2 | Activate pilot activated lighting (PAL) | |  |  |
|  | operational documents applicable to the flight are obtained and checked for currency | | **1** |  |
|  | applicable information contained in documents for flight planning and management is interpreted and applied | | **1** |  |
|  | documents required for the flight are stowed and accessibility for the pilot during flight is ensured | | **1** |  |
| 1. NVR1.3 | Take-off aircraft at night | |  |  |
|  | aircraft is lined up correctly in centre of runway in take-off direction | | **1** |  |
|  | line-up checks appropriate to night take-off are completed | | **1** |  |
|  | take-off by reference to flare path and runway lighting and aircraft instruments is executed | | **1** |  |
|  | aircraft is rotated at manufacturer’s recommended speed | | **1** |  |
|  | climb attitude and control aircraft in climb, after take-off solely by reference to instruments is completed | | **1** |  |
|  | alignment with runway by visual reference and lookout is established and maintained | | **1** |  |
|  | after take-off, checks are performed at a safe height | | **1** |  |
| 1. NVR1.4 | Fly a circuit pattern at night | |  |  |
|  | perform a circuit pattern safely and in accordance with the specified procedures and approved techniques | | **1** |  |
| 1. NVR1.5 | Manage emergency situations at night | |  |  |
|  | (in simulated conditions) aircraft control is maintained | | **1** |  |
|  | emergency situation is managed in accordance published procedures | | **1** |  |
|  | electrical lighting and power sources are monitored | | **1** |  |
|  | electrical lighting and power source emergency procedures are conducted as appropriate | | **1** |  |
| 1. NVR1.6 | Perform a go-around | |  |  |
|  | the need to conduct a go-around is recognised | | **1** |  |
|  | go-around is performed from any point on base and final approach legs | | **1** |  |
| 1. NVR1.7 | Land at night, with and without the use of aircraft landing lights | |  |  |
|  | circuit entry and pattern are performed with reference to runway environment | | **1** |  |
|  | safe altitude is maintained by reference to aircraft instruments and runway lighting | | **1** |  |
|  | aircraft is safely landed at night with and without landing lights | | **1** |  |
|  | after landing checks are performed | | **1** |  |
| 1. NVR2.1 | Determine aircraft meets requirements for NVFR flight | |  |  |
|  | aircraft requirements for NVFR flight are determined | | **1** |  |
|  | flight and navigation instruments, minimum electrical lighting and navigation equipment and any other requirements which are fitted to the aircraft are checked to ensure they are suitable and serviceable for NVFR flight | | **1** |  |
| 1. NVR2.2 | Obtain and use current operational documents | |  |  |
|  | operational documents applicable to the flight are obtained and checked for currency | | **1** |  |
|  | applicable information contained in documents for flight planning and management is interpreted and applied | | **1** |  |
|  | documents required for the flight are stowed and accessibility for the pilot during flight is ensured | | **1** |  |
| 1. NVR2.3 | Prepare flight plan for NVFR flight | |  |  |
|  | charts suitable for intended NVFR flight are selected and prepared | | **1** |  |
|  | applicable information to prepare a flight plan which details tracks, distances, times, altitudes to be flown and fuel requirements to reach destination are obtained, analysed and applied | | **1** |  |
|  | meteorological, airways facilities, aerodrome and NOTAM information applicable to planning and conducting a flight is obtained, interpreted and applied | | **1** |  |
|  | routes to optimise options in the event of an engine failure are planned | | **1** |  |
| 1. NVR2.4 | Determine operational requirements | |  |  |
|  | suitability of the aerodrome lighting for night operations is determined | | **1** |  |
|  | curfew requirements are complied with | | **1** |  |
|  | duration of flight is determined | | **1** |  |
|  | holding, alternate and reserve fuel requirements due to weather, navigation aid availability and aerodrome lighting are determined in accordance with operational requirements | | **1** |  |
|  | total fuel requirements are calculated | | **1** |  |
| 1. NVR2.5 | Make flight notification | |  |  |
|  | flight notification is prepared for planned NVFR flight | | **1** |  |
|  | completed flight notification is submitted | | **1** |  |
|  | flight notification acceptance is confirmed | | **1** |  |
| 1. NVR2.6 | Program navigation system | |  |  |
|  | prepare data for transfer to approved airborne navigation system | | **1** |  |
|  | navigation data is loaded and checked | | **1** |  |
| 1. NVR2.7 | Select, operate and monitor navigation aids and systems | |  |  |
|  | appropriate navigation aids and systems for the planned NVFR flight are selected and operated in accordance navigation aid and system requirements | | **1** |  |
|  | integrity of navigation aid and systems information is monitored and maintained | | **1** |  |
| 1. NVR2.8 | Make visual departure at night | |  |  |
|  | obstacle clearance is ensured until reaching LSALT | | **1** |  |
|  | departure track is intercepted within 5 nm of aerodrome | | **1** |  |
|  | conduct take-off and departure from an aerodrome which is remote from ground lighting as follows: | |  |  |
|  | * + 1. climb out after take-off, using instruments as the primary reference | | **1** |  |
|  | * + 1. after take-off checks are performed at a safe height | | **1** |  |
| 1. NVR2.9 | Navigate the aircraft under NVFR | |  |  |
|  | cockpit and instrument lighting are adjusted to allow reference to documentation, instruments and lookout | | **1** |  |
|  | manages and interprets outputs of on-board navigation systems | | **1** |  |
|  | aircraft position fix is determined visually or with reference to navigation aid and system | | **1** |  |
|  | updates navigation log | | **1** |  |
|  | maintains fuel log | | **1** |  |
|  | uses a recognised navigation work cycle | | **1** |  |
|  | tracks are intercepted to and from visually or with reference to navigation aids and systems | | **1** |  |
|  | track is maintained within tolerances specified in published procedures | | **1** |  |
|  | timings are recorded, assessed and revised as required | | **1** |  |
|  | station passage is recognised | | **1** |  |
|  | planned route above LSALT is maintained | | **1** |  |
|  | route and destination weather conditions are monitored and appropriate actions are executed | | **1** |  |
|  | descent point is calculated and amended | | **1** |  |
| 1. NVR2.10 | Comply with air traffic control rules and procedures for NVFR flights | |  |  |
|  | separation from other air traffic maintained | | **1** |  |
|  | airspace requirements are complied with | | **1** |  |
|  | two-way communication is maintained with ATS and other aircraft | | **1** |  |
|  | ATC clearances and radar vectoring instructions are complied with | | **1** |  |
| 1. NVR2.11 | Manage hazardous weather conditions | |  |  |
|  | hazardous weather conditions are identified and avoided | | **1** |  |
|  | procedures for avoidance of hazardous weather are demonstrated and explained | | **1** |  |
|  | aircraft systems are employed to mitigate the effects of hazardous weather | | **1** |  |
| 1. NVR2.12 | Manage emergency situations at night | |  |  |
|  | (in simulated conditions) aircraft control is maintained | | **1** |  |
|  | emergency situation is managed in accordance published procedures | | **1** |  |
|  | electrical lighting and power sources are monitored | | **1** |  |
|  | electrical lighting and power source emergency procedures are conducted as appropriate | | **1** |  |
| 1. NVR2.13 | Conduct a diversion to revised route or alternate aerodrome at night | |  |  |
|  | requirement for an unplanned diversion is recognised and confirmed | | **1** |  |
|  | route to alternate aerodrome, navigation aid and revised track is determined | | **1** |  |
|  | planned route maintains height above LSALT in accordance with regulations while flying under NVFR | | **1** |  |
|  | flight planned route is diverted to track to an alternate aerodrome, navigation aid or aerodrome | | **1** |  |
|  | operational information for alternate aerodrome(s) is reviewed and applied according to published procedures | | **1** |  |
|  | fuel plan is reviewed and amended according to published procedures | | **1** |  |
| 1. NVR2.14 | Make visual approach at night | |  |  |
|  | descent below LSALT is conducted in accordance with published procedures; | | **1** |  |
|  | track is maintained to destination aerodrome | | **1** |  |
|  | conduct an approach and landing at an aerodrome that is remote from extensive ground lighting | | **1** |  |
| 1. NVR2.15 | Perform a go-around | |  |  |
|  | the need to conduct a go-around is recognised | | **1** |  |
|  | go-around is performed from any point on base and final approach legs | | **1** |  |
| 1. IFF.1 | Determine and monitor the serviceability of flight instruments and instrument power sources | |  |  |
|  | determine serviceability of flight and navigational instruments | | **1** |  |
|  | perform functional checks of flight and navigational instruments where applicable prior to take-off | | **1** |  |
|  | monitor flight instrument and instrument power sources and react to any warnings, unserviceability or erroneous indications | | **1** |  |
| 1. IFF.2 | Perform manoeuvres using full instrument panel | | **1** |  |
|  | interpret flight instrument indications and apply procedures and techniques to achieve and maintain a specified flight path using the aircraft’s full instrument panel | | **1** |  |
|  | set and maintain power and attitude by reference to the full instrument panel to achieve the following: | |  |  |
|  | * + 1. straight and level performance during normal cruise within the flight tolerances | | **1** |  |
|  | * + 1. nominated climb performance within the flight tolerances | | **1** |  |
|  | * + 1. descent performance within the flight tolerances | | **1** |  |
|  | 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 | | **1** |  |
| 1. IFF.3 | Recover from upset situations and unusual attitudes (VMC by day) | | **1** |  |
|  | correctly identify upset situations and unusual attitudes under simulated IMC | | **1** |  |
|  | recover to controlled flight from upset situations and unusual attitudes under simulated IMC from any combination of the following aircraft states: | |  |  |
|  | * + 1. high and low-nose attitudes | | **1** |  |
|  | * + 1. varying angles of bank | | **1** |  |
|  | * + 1. various power settings | | **1** |  |
|  | * + 1. various aircraft configurations | | **1** |  |
|  | * + 1. unbalanced flight | | **1** |  |
| 1. IFL.1 | Recognise failure of attitude indicator and stabilised heading indicator | |  |  |
|  | monitor flight instruments and instrument power sources and recognise warning indicators or erroneous instrument indications | | **1** |  |
|  | transition from a full instrument panel to a limited instrument panel | | **1** |  |
| 1. IFL.2 | Perform manoeuvres – limited panel | | **1** |  |
|  | | interpret and respond appropriately to instrument indications | **1** |  |
|  | | apply power and attitude settings to achieve straight and level performance during: |  |  |
|  | | * + 1. normal cruise | **1** |  |
|  | | * + 1. approach configuration with flaps (when fitted) and undercarriage down | **1** |  |
|  | | apply power and attitude settings to achieve: |  |  |
|  | | * + 1. nominated climb performance; | **1** |  |
|  | | * + 1. nominated descent performance | **1** |  |
|  | | * + 1. during climb, descent and straight and level flight, rate 1 turns onto a nominated heading | **1** |  |
|  | | trim (as applicable) and balance aircraft | **1** |  |
|  | | establish level flight at a nominated altitude, from a climb or descent during straight or turning flight | **1** |  |
| 1. IFL.3 | Recover from upset situations and unusual attitudes – limited panel (VMC by day) | |  |  |
|  | | correctly identify upset situations and unusual attitudes under simulated IMC | **1** |  |
|  | | 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: |  |  |
|  | | * + 1. high and low-nose attitudes | **1** |  |
|  | | * + 1. varying angles of bank | **1** |  |
|  | | * + 1. various power settings | **1** |  |
|  | | * + 1. various aircraft configurations | **1** |  |
|  | | * + 1. unbalanced flight | **1** |  |
| 1. IFL.4 | Re-establish visual flight | |  |  |
|  | | transition from visual flight conditions to instrument flight conditions while maintaining control of the aircraft | **1** |  |
|  | | perform a manoeuvre to re-establish visual flight | **1** |  |
|  | | implement a plan that ensures the flight continues in VMC | **1** |  |
| 1. NTS1.1 | Maintain effective lookout | |  |  |
|  | | maintain traffic separation using a systematic visual scan technique at a rate determined by traffic density, visibility and terrain | **1** |  |
|  | | maintain radio listening watch and interpret transmissions to determine traffic location and intentions | **1** |  |
|  | | perform airspace-cleared procedure before commencing any manoeuvre | **1** |  |
| 1. NTS1.2 | Maintain situational awareness | |  |  |
|  | | monitor all aircraft systems using a systematic scan technique | **1** |  |
|  | | collect information to facilitate ongoing system management | **1** |  |
|  | | monitor flight environment for deviations from planned operations | **1** |  |
|  | | collect flight environment information to update planned operations | **1** |  |
| 1. NTS1.3 | Assess situations and make decisions | |  |  |
|  | | identify problems | **1** |  |
|  | | analyse problems | **1** |  |
|  | | identify solutions | **1** |  |
|  | | assess solutions and risks | **1** |  |
|  | | decide on a course of action | **1** |  |
|  | | communicate plans of action (if appropriate) | **1** |  |
|  | | allocate tasks for action (if appropriate) | **1** |  |
|  | | take actions to achieve optimum outcomes for the operation | **1** |  |
|  | | monitor progress against plan | **1** |  |
|  | | re-evaluate plan to achieve optimum outcomes | **1** |  |
| 1. NTS1.4 | Set priorities and manage tasks | |  |  |
|  | | organise workload and priorities to ensure optimum outcome of the flight | **1** |  |
|  | | plan events and tasks to occur sequentially | **1** |  |
|  | | anticipate events and tasks to ensure sufficient opportunity for completion | **1** |  |
|  | | use technology to reduce workload and improve cognitive and manipulative activities | **1** |  |
| 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 | **1** |  |
|  | | define and explain objectives to stakeholders | **1** |  |
|  | | demonstrate a level of assertiveness that ensures the optimum completion of the flight | **1** |  |
| 1. NTS2.1 | Recognise and manage threats | |  |  |
|  | | identify relevant environmental or operational threats that are likely to affect the safety of the flight | **1** |  |
|  | | identify when competing priorities and demands may represent a threat to the safety of the flight | **1** |  |
|  | | develop and implement countermeasures to manage threats | **1** |  |
|  | | monitor and assess flight progress to ensure a safe outcome, or modify actions when a safe outcome is not assured | **1** |  |
| 1. NTS2.2 | Recognise and manage errors | |  |  |
|  | | apply checklists and standard operating procedures to prevent aircraft handling, procedural or communication errors | **1** |  |
|  | | identify committed errors before safety is affected or the aircraft enters an undesired state | **1** |  |
|  | | monitor the following to collect and analyse information to identify potential or actual errors: |  |  |
|  | | * + 1. aircraft systems using a systematic scan technique | **1** |  |
|  | | * + 1. the flight environment | **1** |  |
|  | | * + 1. other crew | **1** |  |
|  | | implement countermeasures to prevent errors or take action in the time available to correct errors before the aircraft enters an undesired state | **1** |  |
| 1. NTS2.3 | Recognise and manage undesired aircraft state | |  |  |
|  | | recognise an undesired aircraft state | **1** |  |
|  | | prioritise tasks to ensure an undesired aircraft state is managed effectively | **1** |  |
|  | | apply corrective actions to recover an undesired aircraft state in a safe and timely manner | **1** |  |

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