D2.16 Procedure for the conduct of CPL skill test, IR skill test and ME and IR proficiency checks in Malta

D2.16.1 TM-CAD Examiner Briefing – Conduct of Tests

References:

JAR Flight Examiners Manual V18 Modules 7, 8 and 9
Appendices 4, 7 & 9 to EASA Part-FCL
EU-Operations

Introduction

This briefing covers the practical conduct of tests to the issue of licences and ratings by TM-CAD, taking into account the constraints imposed by Malta's unique location. The tests specifically covered are the Commercial Pilot Licence Skill Test (CPL ST), initial Instrument Rating Skill Test (IR ST) and ME Class Rating/Instrument Rating Revalidation or Renewal Proficiency Check (CRIR PC). Each test/check will be considered separately although there are a number of common points.

D2.16.2 CPL Skill Test

General. Transits to and from Sicily will be required so that the En-route section may be completed over land. These transits can be used to complete other sections of the test.

Section 1 – Departure. Performance planning must be carried out in accordance with the ATO Operations Manual. It is expected that the Operations Manual will require planning in accordance with EU-OPS as the CPL course is designed to train pilots for commercial air transport.

Section 2 – Airwork. Both visual and instrument airwork can be completed during the transits to and from Sicily, once clear of the immediate vicinity of Luqa. By judicious use of lookout turns etc, a general movement towards one's destination can be achieved. It is assumed that visual straight & level, climbing, descending and medium turning will be assessed during the entire flight rather than as separate airwork items, although a VX climb may be used to help satisfy the slow flight requirement. During the airwork, the examiner will be responsible for ATC liaison and navigation. Instrument airwork should be carried out with the applicant wearing TM-CAD approved foggles or hood. During limited panel work the PFD, if fitted, should be covered with a TM-CAD approved screen rather than just dimmed. If the aircraft is not fitted with a turn coordinator/turn needle then use of a standby AI is acceptable.

Section 3 – En-route. The visual navigation legs of the En-route Section must be flown over Sicily. The transit to Sicily should be 'all aids' and the coast-in point can be set up as a GPS waypoint. Around 20 miles from Sicily any airwork should be terminated and the applicant briefed on his present position. He should then fly to the coast-in point. Once it is visually identified, all navigation aids should be disabled by de-tuning (VOR, DME, ADF) or by blanking the MFD (winding the range out to 300nm or setting the traffic page is quite effective). Wind information should be removed from the PFD if possible. The first leg should be around 20 mins duration and the applicant should use a recognised method of navigation. At or before reaching the first waypoint the applicant should be given a diversion destination. This destination should be a geographical feature around 20 mins distant. There should be at least 30° between inbound and outbound tracks. On the diversion leg the applicant may use terrestrial radio aids to assist his navigation, but not processed GPS information. If the applicant has successfully reached the first waypoint, the diversion leg can be curtailed once it is apparent that the applicant is highly likely to reach the diversion destination. Section 3 also includes fixing and tracking using terrestrial radio aids while in instrument flight (wearing foggles or a hood); if no suitable aid is available to track, then a GPS 'direct to' may be substituted as long as the MFD remains hidden. These items are best carried out during the transits at the same time as the instrument airwork.

Section 4 – Approach and Landing. This section should, whenever possible be carried out at an airfield other than Luqa, such as Comiso. The arrival can be started directly from the end of the en-route diversion or after part of the airwork. Before handing responsibility for ATC liaison and navigation to the applicant, the examiner should brief him on current position and ATC service received. One approach, usually the asymmetric landing, should be 'saved' for the final arrival at Luqa. However, unless the applicant's performance during the arrival at Comiso left doubt in the examiner's mind, the arrival procedure at Luqa should not form part of the assessment. Resetting the engine to 'failed' during the arrival at Luqa is the examiner's responsibility and no emergency drills are required from the applicant. Examiners may need to use their judgement when considering whether ATC instructions are 'reasonable'. If they consider that the instructions are outside of normal aviation practice then they may need to assist the applicant without penalty to him. Examiners should confirm touch-and-go procedures with the applicant before departure. Touch-and-goes are not an assessed item and so, if the applicant does not wish to do them or requires that the examiner raises the flap and re-trims when on the runway, then his wishes should be respected.

Section 5 – Abnormal Procedures. On an ME aeroplane, this section requires a fire and a system failure. The fire can be usefully combined with the actual engine shutdown required in Section 6. However, airmanship/TEM considerations must be adhered to: the shutdown should be carried out at a safe height (3000ft agl/amsl or as required by the ATO Ops Manual) and within

sensible range of an airfield with suitable weather conditions; on an aeroplane with air-cooled, turbocharged engines, there should be a cooling period at low power before shutdown and after restart. The examiner will need to brief the required procedures before flight. System failures will be touch drills but the applicant should be expected to carry out the appropriate airmanship/TEM actions by making in-cockpit radio calls and changing track if necessary. System failure drills are not 'memory items'. Circuit breakers should not be pulled to simulate emergencies.

Section 6 – Asymmetric and Class Rating. The EFATO, asymmetric go around and asymmetric landing should be combined with Section 4. The engine restart should be accomplished by the applicant using the checklist. Use of aircraft systems is required for the issue of a class rating. The autopilot, if fitted, must be used at some point. The only times acceptable for autopilot use are: during the transit to/from Sicily (except when airwork and fixing/tracking is carried out), airfield arrival (Comiso and Luqa), during the system failure (unless the simulated failure is such that autopilot use would be inadvisable). Full use of the GPS (with a current database) is allowed for all of the flight except Section 3; applicants should, at least, be familiar with the 'Direct-to' function and be capable of transferring navigational information to the HSI. If the aircraft is fitted with anti-icing equipment then the applicant should be familiar with its use. The rejected take-off may be best done immediately after the final landing, given the length of the Luqa runways, but examiners will have to use their judgement as to when is the best time for this manoeuvre. The rejected take-off should be initiated by the examiner saying "stop" or by simulating some form of warning or caution. Applicants must be briefed to use the full length of the runway remaining when stopping.

Repeat Items. Repeats are at the examiner's discretion but should be used sparingly on a skill test, and only when some external factor is judged to have affected the applicant's performance.

Partial Pass. An applicant gaining a partial pass will be required to retake the failed section. He will be expected to put the aeroplane in a position from which this section can be carried out. Once the failed section has been flown, the test is complete; however, if the applicant elects to fly the aeroplane back to Luqa, then he will be assessed.

D2.16.3 IR Skill Test

General. This test is intended to simulate a practical flight. To this end, the first preference should always be to fly the En-route Section as a transit to another airfield rather than as a triangular navigation exercise around the Malta FIR. Both Comiso and Catania Fontanarossa are within practical range. However, if it is obvious that weather conditions preclude an approach in Sicily, or ATC will not accept the movement, a route within the FIR would be acceptable as a last resort. Both a precision (ILS) and a non-precision (VOR, NDB, LLZ, GPS) approach are required. At least one approach must be procedural. The approaches can be flown in any order. Simulated weather conditions for the flight are: cloud throughout the levels flown and at minimums for the approaches; freezing level as actually experienced.

Section 1 – Departure. Performance planning must be in accordance with the ATO Operations Manual. The applicant must complete and submit an IFR flight plan. If possible, a SID should be flown. The applicant should don TM-CAD approved foggles/hood after take-off once the aeroplane has been put in the climb configuration. The applicant should check the OAT regularly and check for ice when appropriate.

Section 2 – Airwork. It is assumed that full-panel straight & level, climbing, descending and turning will be assessed during the entire flight rather than as separate airwork items. Item (d) will be covered by recovery from incipient stalls in the base turn and final approach configurations. Item (c), full panel unusual attitudes, will be covered by successful completion of Item (e). Before starting the limited panel manoeuvres, the PFD (or main AI and HSI/DI plus RMI) must be covered with TM-CAD approved screens, dimming is not sufficient. If a turn coordinator/turn needle is fitted then this should be used; otherwise, use of a standby AI is acceptable. Instrument airwork should be carried out on the transit back from Sicily or during the last navigation leg. The examiner is responsible for navigation and ATC liaison during the section. After the airwork the aircraft should be sufficiently far from Luqa for the applicant to carry out all of the necessary arrival procedures within a reasonable time. The applicant should be briefed on his position and ATC service received before being given back responsibility for navigation and ATC liaison.

Section 3 – En-route. During the En-route Section the applicant should track towards and away from a facility. GPS can be used as required as long as the equipment has a current database. Autopilot may be used in the cruise and descent in Heading, Altitude or Vertical Speed modes. Position reports are as required by ATC. The examiner may simulate a build-up of ice and require appropriate touch-drills. The transit to Sicily should normally be made along an ATS route (usually N982). This will require a transit at FL100. If, during the climb, it becomes apparent that FL100 will not be reached then a lower level, outside CAS, should be negotiated. Although the return from Sicily will normally be flight

planned as IFR, examiners should consider cancelling IFR on departure from Comiso/Catania and transiting at a lower, VFR level during which the airwork can be carried out. IFR can be resumed before the recovery to Luqa.

Section 4 – Precision Approach. The precision approach (ILS) may be flown procedurally or using radar vectors. It can be the first or second approach flown. If Comiso or Catania is available then it would be preferable to fly the ILS second as a vectored asymmetric approach at Luqa. GPS should be disabled and the MFD hidden if a procedural approach is flown. The approach must be hand-flown without the use of a flight director.

Section 5 – Non-precision approach. This can be a VOR, LLZ, NDB or GPS approach, flown procedurally or using radar vectors. It can be the first or second approach flown. If Comiso or Catania is available it would be preferable to fly the non-precision approach first as a hold and procedural approach. If both approaches are to be at Luqa, it would be preferable to fly the hold and procedural approach first (precision or non-precision). If equipment allows, the hold should be a single-needle exercise. Wind information should be removed from the PFD if possible. Loss of glidepath information for the LLZ approach can be simulated on the G950/G1000 by a post-it type label being placed over the glidepath indicator. GPS should be disabled (if possible) and the MFD hidden during the hold and procedural approach. The approach must be hand-flown without use of a flight director. During the pre-flight brief the examiner must ascertain whether a CDFA is planned and what increment the applicant plans to add to MDA/H.

Section 6 – Asymmetric. The EFATO should be given, at a safe height (500 ft), on the go-around from the first approach. If the first approach is at Luqa then the aircraft should remain on one engine for the subsequent approach. If at Comiso or Catania, the examiner should restore the failed engine on climb-out, but not before he has seen all drills completed and the aircraft stabilised at VYSE. It is the examiner's responsibility to reset any associated controls (ie mixture, cowl flaps, rpm) when restoring or re-failing the engine. The engine should be re-failed at some point approaching Luqa, preferably in the descent so that the asymmetric forces are minimised. During an asymmetric ILS approach the foggles/hood should be worn for the go around and then removed once the aircraft is stabilised in the climb. During an asymmetric non-precision approach the examiner has the choice of leaving the applicant's foggles/hood on or removing them just before MDA. If he removes them, the applicant should, with the required visual references, continue to ACA/H and then go around into the visual circuit. If the foggles/hood remain on then the applicant should go around at his stated margin above MDA/H before entering the visual circuit. The asymmetric landing will be from a visual approach. If the school's Operations Manual requires an ACH of greater than 200ft then an increment may need to be added to the DA for a precision approach. Schools using an ACH of greater than 300ft should be referred to TM-CAD before any test is undertaken.

Repeat Items. Repeats are at the examiner's discretion but should be used sparingly on a skill test, and only when some external factor is judged to have affected the applicant's performance.

Partial Pass. An applicant gaining a partial pass will be required to retake the failed section. He will be expected to put the aeroplane in a position from which this section can be carried out. Once the failed section has been flown, the test is complete; however, if the applicant elects to fly the aeroplane back to Luqa, he will be assessed.

D2.16.4 MEP/IR Proficiency Check

General. The combined MEP/IR Proficiency Check is subject to many of the conditions listed in the briefs for the CPL and IR STs, but there are some fundamental differences.

Section 1 – Departure. Performance planning should be carried out; however, the choice of safety factors is the applicant's unless he is operating to a specified operations manual. The departure should be carried out without visual reference (using foggles or a hood) once the aeroplane is established in the climb. Autopilot may be used, if fitted and serviceable.

Section 2 – Visual Airwork. This should be carried out after the route sector. All mandatory items must be covered. The applicant is responsible for lookout throughout.

Section 3B – Instrument Flight. Excepting the airwork and the ILS approach, the applicant should have full use of the equipment fitted to the aeroplane. The route sector can comprise the SID to Gozo followed by a leg to 20nm west of the GZO beacon but, at the examiner's discretion, may be flown to Comiso. Instrument airwork, comprising limited panel turns and UA recoveries should be carried out, along with the visual airwork, after the route sector. All airwork exercises must be hand-flown, but a flight director may be used if fitted. During this phase, the examiner is responsible for ATC liaison and navigation. After the airwork the examiner should brief the applicant on his position and ATC service received before giving him control for the recovery to Luqa. The most efficient format would be to carry out a hold and procedural approach followed by a radar vectored approach, but this may not always be possible. Loss of glidepath information for a LLZ approach can be simulated on the G1000 by use of a post-it type label being placed over the glidepath indicator. Both autopilot and flight director may be used during the hold and non-precision approach. The autopilot may not be used for the ILS and should be disconnected before localiser capture.

Section 4 – Approach and Landing. Circuits to achieve a normal and flapless landing may be flown after the asymmetric go around, with the examiner restoring the failed engine on the climb-out. The examiner will then have to re-fail the engine before the asymmetric landing. The examiner is responsible for resetting the associated controls. The examiner must agree procedures for touch-and-go landings with the applicant.

Section 5 – Abnormal Procedures. A rejected take-off must be carried out at some stage. See CPL ST Section 6. Although it is not a mandatory item, examiners should consider simulating a system failure of some kind. On initial ME class rating skill tests an engine shutdown and restart is a mandatory item. Considerations for these 2 items can be found in the CPL ST Sections 5 and 6.

Section 6 – Asymmetric. Items in this section should be flown by sole reference to instruments as far as is possible. However, these items count towards both the IR and the ME class rating even though they are normally flown on instruments. Should the applicant's performance during the EFATO and/or asymmetric go around on instruments be unsatisfactory, consideration should be given to re-flying them visually so that the class rating can be properly assessed.

Repeat Items. Repeats are at the examiner's discretion. An applicant undergoing a proficiency check has previously shown that could conduct the necessary manoeuvres and items may be repeated where the examiner considers it appropriate. Applicants should not, however, be re-taught by the examiner before repeating a manoeuvre.

Pass/Fail. The pass/fail and retest criteria for the IR and Class Rating are different. If an item of the class rating test is failed then that section is failed and must be retested. If 2 sections are failed then the entire class rating must be re-flown. If any item/s in the IR (ie parts of Section 1, Section 3B and Section 6) then that item is/those items are to be retested. If any item is failed on either the class rating or IR retest then the whole test (Class Rating or IR) must be retaken.

D2.16.5 Combined Tests

Whilst it is usual to combine a class rating and instrument rating renewal/revalidation proficiency check, combining CPL and IR skills tests or Class rating revalidations and initial IR skills tests may not be in the best interests of the applicant.

D2.16.5.1 CPL plus Initial IR. The CPL skills test, by itself, is likely to take at least 2:45 block time. Although there are some elements common to both tests (approach configuration stalls, limited panel, asymmetric work) and one of the transits to/from Sicily could be used for IR Section 3, the requirement to fly a hold and 2 instrument approaches will add at least 35 mins to the flight. In addition, unsatisfactory performance in any of the 'shared' items will require them to be re-flown visually so that they can be assessed for the CPL. Expecting an ab-initio applicant to be on the top of his game for over 3 hours is unrealistic and so these tests should not normally be combined. Any request to do so (for example, an experienced ICAO licence holder converting to an EASA licence) should first be approved by TM-CAD.

D2.16.5.2 Initial IR plus Class Rating. These tests could be combined and would produce a format similar to the combined IR and CR proficiency check. However, the test will be longer than the proficiency check as the en-route section is likely to require a transit to Sicily and will, in any case, require a longer en-route section than the proficiency check. Examiners will, again, need to be mindful of the consequences of the applicant failing any of the 'shared' items, which will now include some of the stall recoveries. Before agreeing to combine

the tests, the examiner will need to brief the applicant comprehensively and explain the plusses and minuses of such an action.

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