EASA PART 145
CONTINUATION TRAINING

DATED: December 2013 (Q3 & Q4)
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1. Introduction

The purpose of the Part 145 continuation training is to keep ALT Engineers and Mechanics up to date with regulatory issues, the things that affect our EASA Part 145 approval.

This will cover recent Quality memos regarding the day to day issues that have arisen and also cover relevant audit findings that have been discovered by the ALT Quality department along with the Operator's quality audits.

2. UK CAA Information Notices

2012-056 Exemptions to EU regulation issued by Airworthiness
The CAA has applied a fee to the processing and issue of exemptions from EU regulations (such as Part 145). Applications now have to be processed by A&A at Gatwick before being passed to the local office for consideration.

2012-077 Stansted Regional Office Closure
The CAA gave information about the closure of Stansted Regional Office and relocation of staff and functions to the Luton Regional Office.

2012-176 Winter Operations
Gives a link to the UK CAA website Winter Operations page. The page is a useful source of information relating to issues specific to winter operations.
www.caa.co.uk/winteroperations

2012-141 Part 66 Documentation Requirements and the new B3 License
For new Part 66 Licenses, experience gained outside a Part 145 or Part M organisation will only be accepted with a covering letter from the relevant national authority confirming the validity of the referee signing the application form. In addition the information notice gives information relating to the introduction of the B3 license.

2012-206 Part 66 Application Rejections – Change in process
Information regarding a new process for licensing department application rejections. From early 2012 the CAA will send back incorrect or incomplete applications. The current 30 day grace period to resolve open issues will be discontinued.

There were no applicable UK CAA Safety Notices for this period.
3. MOE & TP Changes

MOE changes for the period are as follows:

**Issue 1, Rev 8**
The B757 was added to the scope of the AOI Station and the A319 & A321 were added to the ALT Part 145 approval.
L2.8 was revised to document the use of the EATL lost tool procedure only for tooling booked out of the EATL store.
Changes to the Quality procedures were made to allow the use of external auditors without the need to continually add them to the MOE.

**Issue 1, Rev 9**
Addition of Venice to the approved line locations under the ALT approval

**Issue 2, Rev 0**
The MOE has been completely re-issued to improve, correct and reduce complexity relating to the administration of changes and reflect the change of head office address and that of the CAA local office. Additional changes are as follows:

1.3, 1.4 & 1.5, 1.7, 1.8, 1.9, 1.10 & 1.11 updated to reflect the NDT Variation, remove reference to the LGG Line Station and introduce passive approvals. Reference to the Commercial Director updated and the MD position removed. Various minor changes to reflect personnel changes mentioned above.

2.5.1 & 2.6.4 revised to tighten controls on personally owned calibrated equipment to ensure compliance with 145.A.40.

2.16 revised to introduce the EASA Form 1 issue for the purpose of the D1 rating variation.

3.1 revised to add reference to the NDT Level 3.

3.4 revised to reflect changes to the approval system and incorporate the requirements of recent regulatory changes relating to Part 145.A.35 / Part 66.A.20 with regard to licensing.

3.5 revised to update the list of record items relating to B1/B2 staff.

3.11 revised to reflect the requirements for the approval of staff under the D rating.

3.14 revised to incorporate slight differences with respect to the NDT rating.

4.1 Reference to Thomas Cook & Air Cargo Germany removed.

5.1 revised to incorporate the ALT EASA Form 1

5.2 revised removing LGG from the list of approved locations.
TP changes for the period are as follows:

**Rev 8**
TP 2 Liege amended to include the A319 & A320.
TP 26 Ancona amended to include the B757.

**Rev 9**
TP 35 was issued to reflect the line station controls in Venice
Minor changes to TP5 were made to reflect the appointment of Trish Hunter
Minor administrative changes were made to TP 27 Leipzig.

**Rev 10**
TP 2 & 34 have been deleted to reflect the closing down of the LGG Line Station.
TP 8 has been revised to reflect changes to the authorisation system.
TP 9 has been revised to reflect introduction of a new format handover document as a result of internal audit findings.
TP 14 has been introduced to allow & control passive aircraft type approvals.
TP 25 relating to BGY has been revised to reflect internal audit finding requirements.
TP 36 has been introduced to show compliance with CAP 747, GR23 with respect to the creation of an NDT Manual.

**4. Company Changes**
The Managing Director has elected to take a year out and as such, corresponding changes have been made to the MOE. In addition, the position of Commercial Director has been removed. The NDT Section has been added showing day to day responsibility through Brian Hunter. The current organisation chart is on the next page.

The company address for the head office has changed and due to the lack of 747-400 & A319/320/321 work, ALT Management has elected to withdraw the Liege Line approval. As the Liege Line supported the A320 & 747 type approvals, those types have been made passive. Resurrection of those approvals can be achieved following the new TP 14 Passive Approvals process as agreed and approved by the UK CAA.

The NDT section has been set up in Liege and will be managed day to day by Brian Webb. Working with Brian is Steven Vanhacht and oversight is in place utilising a contracted Level 3 NDT Engineer called Matt Geraghty. The service offered is all mobile and covers Ultrasonic, Eddy Current, Thermographic, Penetrant & Magnetic Particle. The work is covered by an extension to the ALT Part 145 to include the NDT D1 rating. TP 36 along with numerous changes to the MOE covers the scope of the NDT work. The approval certificate has been amended to show the D1 rating and is available on TechCom.
* Denotes Form 4 position

Note: Positions with an orange background are network based as indicated by the airport code.
5. Changes to the ALT Personal Authorisation System

The ALT authorisation system has changed introducing the following changes, mainly in MOE 3.4:

- Simpler application process and forms
- New one page authorisation documents
- Better defined requirements for obtaining approval
- EGR / Borescope requirements have been defined
- Renewal requirements have been defined
- 6 in 24 has been defined taking into account the new requirements of Part 145 & Part 66.
- The full scope of the B2 authorisation has been incorporated into TP8 (see changes to Part 66 further on).
- The ability to make more extensive use of CAT A has been introduced into TP 8 and the restriction limiting CAT A use has been removed from the MOE 3.4.

As far as the requirements are concerned, MOE 3.4 now gives you in a list format, a comprehensive set of requirements for achieving, adding to or renewing approvals.

The new Personal Authorisation Certificate is now presented as a single A4 sheet containing the following information:
If shaded, the approval is passive and cannot be used. This is part of an MOE/TP requirement that allows us to retain dormant (to ALT) types on our Part 145 approval when there is no prospect in the near term of ALT maintaining that type. TP 14 refers.

**Note 1:** Maintenance CR code “D” includes Inspection, Repair, Defect Rectification, Minor Modifications, Independent inspection (within trade), component changes (not major) and Stores Goods Inwards Inspection.

**Note 2:** If maintenance is fully shaded in grey above, the approval is passive. Work may not be carried out or certified using the ALT Part 145.

**Note 3:** Where type, category, limitations are fully shaded in grey above, the approval is passive. Work may not be carried out or certified using the ALT Part 145.

The old codes for Inspection, Repair, Defect Rectification, Minor Mods, Independents, component changes and stores goods inwards inspections have been consolidated into one code “D”.

This section is in place to cater for Category A tasks. Note that line checks (e.g. Daily) will now only be shown in the function codes and will not be listed separately in the specific task approvals. This section will only be used should ALT start issuing more extensive CAT A approvals as detailed in TP 8.

**Specific Task Approvals**

- Wheel Replacement (B777)
- Brake Replacement (B777)
- Emergency Equipment Replacement (B777)
- Over / Inlet replacement (B777)
- Replacement of Static Walls (B777)
- Male Battery Replacement (B777)
Approval Categories

Part 66 Category A or limited mechanical tasks under an B2 license (Part 66, A.27(a) 1 & (a) 3 (f) refer)
As identified in the specific task approvals listing, certification is limited to work performed by the authorisation holder.

Part 66 Category B1
- Aircraft Structure, powerplant and mechanical and electrical systems (including lighting)
- Avionic LRU requiring only simple tests to prove serviceability (TPM, Appendix B Refer)

Part 66 Category B2
- Avionic & Electrical systems (including lighting)
- Electrical and avionic tasks within mechanical systems requiring only simple tests to prove serviceability.

NDT Categories
- Performance and certification (not including EASA Form 1) relating to the specified NDT category / technique within the limitations of IP-36.

Limitation XX is added to allow ALT to withhold the additional scope of the B2 (as given by recent Part 66 regulation changes) where appropriate training cannot be demonstrated.

This will not be an issue for most ALT B2 engineers as most already hold B1 electrics which covers all of this limitation. This limitation will only apply to the engineers that have a full B2 without B1 electrics where the type training did not cover the scope of the limitation.

For info, courses under Part 147 will cover this additional scope as a mandatory requirement from July 2013 therefore it is not expected that this limitation will be utilised for an extended period of time.

Limitations

Where a limitation code is included, the limitation listed against that code below applies only ALT relevant codes shown. Where the limitations are “non-UK” standard, it is acceptable for the limitations section to refer directly to the code.

1. Excluding Power Generation and Distribution Systems
2. Excluding Instrument systems, IRS / IRIS and Flight Direction Systems
3. Excluding Autopilot Systems on Aeronautics
5. Excluding Automatic Landing & Throttle Systems on Aircraft
6. Excluding Radio Communications / navigation and Radar Systems
7. Excluding Radio / Radar Systems
9. Excluding Avionic (RJ)
10. Excluding Airframe
11. Excluding Engine

XX. Excluding electrical and avionic tasks within powerplant and mechanical systems (does not exclude ATA 24).
6. Important Changes to Part 145 & Part 66

Recent relevant changes to Part 145 are summarised below (note that other changes are in place but have been left out if not directly relevant to ALT):

- Changes to Part 145.A.30 have allowed authorisation for minor scheduled maintenance equivalent to Cat A for B2 staff that do not hold a CAT A. There are a few limitations such as it only applying to types for which that B2 has a type rating and limited to work that the B2 has personally performed. The B2 has to have six months experience of the type of work to be authorised (in the last twenty four months).

- AMC 145.A.35 (a) has been amended (relates to ensuring knowledge before issue of a Personal Authorisation) and specifically mentions training of differences between the basic model and the specific variant / major mod state to be authorised. It also talks about the need to ensure competence in procedural knowledge (internal and operator). Special maintenance tasks are covered (such as borescope / EGR). Changes to 3.4 & 3.14 of the MOE cover the above.

- 145.A.35 now makes reference to AMC 66.A.20 (b) 2 with regard to clarification of what the term “six months of actual relevant aircraft maintenance experience in any consecutive 2-year period” means. This is interpreted by ALT and covered in MOE 3.4.

- Note that the above also makes reference to the need for an engineer to maintain a log book. We are seeing more and more organisations that are no longer accepting recency letters and this is driven by the rule change. The accepted regulated way of achieving the same thing is to have an Aircraft Maintenance Personnel Experience Credential (Issued by the 145 on leaving) and a personal log book.
As it is driven by the rule, this will become standard in the industry and you are now in a position where not holding an up to date log book may well jeopardise your ability to move between organisations. The message is clear in as much as for your own benefit, you need to keep a log book.

### AMC 66.A.20(b)2 Privileges

The 6 months maintenance experience in 2 years should be understood as consisting of two elements: duration and nature of the experience. The minimum to meet the requirements for these elements may vary depending on the size and complexity of the aircraft and type of operation and maintenance.

1. **Duration:**
   - Within an approved maintenance organization:
     - 6 months working with the same organisation; or
     - 6 months split up into different blocks, working within the same or in different organisations.  
   
   The 6 months period can be replaced by 100 days of maintenance experience in accordance with the privileges, whether they have been performed within an approved organisation, or as independent certifying staff according to M.A.801(b)2, or as a combination thereof.

   When licence holder maintains and releases aircraft in accordance with M.A.801(b)2, in certain circumstances this number of days may even be reduced by 50% when agreed in advance by the competent authority. These circumstances consider the cases where the licence holder happens to be the owner of an aircraft and carries out maintenance on his own aircraft, or where a licence holder maintains an aircraft operated for low utilization, that does not allow the licence holder to accumulate the required experience. This reduction should not be combined with the 20% reduction permitted when carrying out technical support, or maintenance planning, continuing airworthiness management or engineering activities. To avoid a too long period without experience, the working days should be spread over the intended 6-months period.

2. **Nature of the experience:**
   - Depending on the category of the aircraft maintenance licence, the following activities are considered relevant for maintenance experience:
     - Servicing;
     - Inspection;
     - Operational and functional testing;
     - Troubleshooting;
     - Repairing;
     - Modifying;
     - Changing component;
     - Supervising these activities;
     - Releasing aircraft to service.

For category A licence holders, the experience should include exercising the privileges, by means of performing tasks related to the authorization on at least one aircraft type for each licence subcategory. This means tasks as mentioned in AMC 145.A.30(g), including servicing, component changes and simple defect rectifications.

For category B1, B2 and B3, for every aircraft type rating included in the authorization the experience should be on that particular aircraft or on a similar aircraft within the same licence (sub) category. Two aircraft can be considered as similar when they have similar technology, construction and comparable systems, which means equally equipped with the following (as applicable to the licence category):
- Propulsion systems (piston, turboprop, turbofan, turboshaft, jet-engine or push propellers); and
- Flight control systems (only mechanical controls, hydromechanically powered controls or electromechanically powered controls); and
- Avionic systems (analogue systems or digital systems); and
- Structure (manufactured of metal, composite or wood).

For licences endorsed with (sub)group ratings:
- In the case of a B1 licence endorsed with (sub)group ratings (either manufacturer sub-group or full (sub)group) as defined in 66.A.45 the holder should show experience on at least one aircraft type per (sub)group and per aircraft structure (metal, composite or wood).
- In the case of a B2 licence endorsed with (sub)group ratings (either manufacturer sub-group or full (sub)group) as defined in 66.A.45 the holder should show experience on at least one aircraft type per (sub)group.
- In the case of a B3 licence endorsed with the rating “piston-engine non-pressurized aeroplanes of 2000 Kg MTOM and below” as defined in 66.A.45, the holder should show experience on at least one aircraft type per aircraft structure (metal, composite or wood).

For category C, the experience should cover at least one of the aircraft types endorsed on the licence.

For a combination of categories, the experience should include some activities of the nature shown in paragraph 2 in each category.

A maximum of 20% of the experience duration required may be replaced by the following relevant activities on an aircraft type of similar technology, construction and with comparable systems:
- Aircraft maintenance related training as an instructor/assessor or as a student;
- Maintenance technical support/engineering;
- Maintenance management/planning.

The experience should be documented in an individual log book or in any other recording system (which may be an automated one) containing the following data:
- Date;
- Aircraft type;
- Aircraft identification i.e. registration;
- ATA Chapter (optional);
- Operation performed i.e. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, troubleshooting, structural repair, STC embodiment...;
- Type of maintenance i.e. base, line;
- Type of activity i.e. perform, supervise, release;
- Category used: A, B1, B2, B3 or C;
- Duration in days or partial-days.
7. Engineering Bulletins

GEN-00-024 ESDS Line Station Provisioning

ESDS kits have been purchased for all non-LEJ line stations. The set up procedures are included in the referenced EB.

GEN-00-021 Personal Toolbox Control
GEN-00-022 Lost Tooling

Personal tool control remains the technical issue of highest risk to ALT with regard to our customer and recent audits have illustrated that the LEJ station still has work to do to bring the control of personal tooling to an acceptable standard per the MOE and recent commitments to our customer. This EB has been included in CBT again to remind engineers of the safety importance of this issue.

Please note also that the practice of retaining a “not subject to calibration” AVO in personal toolboxes is no longer permitted. It didn’t meet the 145 requirements and the MOE has recently been amended to specifically prohibit this practice.

Other EBs of interest are included in the Human Factors module.

8. SIRS Feedback (Component Installation)

A question was raised via the SIRS scheme relating to the ability of an engineer to install a component on an Air Contractors aircraft that has been shipped directly to them without passing through ACL or EATL stores.

Except in very specific circumstances, Part 145 requires that all non-standard parts fitted are accompanied by an EASA Form 1 or equivalent. As ALT in some locations do not have stores control (e.g LEJ), the inspection to meet this requirement happens when the engineer accepts the part from the stores as this is the point it crosses into the ALT 145 control. This explains why ALT engineers all have Stores Goods In approval. For the purpose of ALT, this documentation is always required to install a non-standard part (See Q2 CBT).

As with all line operations, you are going to get situations where the part is shipped directly to the engineer. In these cases, if permitted by the customer’s procedures and as long as the paperwork with the part meets the requirements stated above (EASA Form 1 or equivalent), the part can be installed and the aircraft released without a customer GRN tag being generated by the customer’s stores system.

So in the example of ACL:

ALT MOE 2.1.2 allows acceptance based on the EASA Form 1
ACL MMOE 2.3.1 allows it “where appropriate, components may be accepted directly from the relevant contracting organisation, subject to inspection of the component and associated paperwork by an appropriately authorised engineer”