



This publication is advisory only. It gives an alternative method for complying with the Civil Aviation Regulations. It is not the only method, but experience has shown that if you follow this method you will comply with the CARs.

Read this advice together with the appropriate regulations and Civil Aviation Orders.

Contents ...

Background	2
PCT program	3
Service familiarisation	4
Experience analysis	6
PCT course	8
PCT trainer	12
PCT review	15
Responsible manager	18
Program audit	18
Documentation	20
Approval process	24
Deviations from Normal PCT requirements	28
Sample documents	28
Annexes	29

Practical Consolidation Training

An alternative method for LAME to gain the practical experience required for type ratings.

The relevant regulatory documents

- Civil Aviation Regulation 30 & 31
- Civil Aviation Order 100.90 Series
- Airworthiness Advisory Circulars - Part 9

Who this publication applies to

- Organisations approved to maintain group 20/21/22 aircraft and/or engines
- Organisations approved to train candidates for the examinations required for group 20/21/22 ratings
- Aircraft Maintenance Engineers seeking a group 20/21/22 type rating

Why this publication was written

To provide guidance for the establishment of an alternative structured practical training program to satisfy the practical experience requirements for AME type ratings.

For further information

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Background

When a LAME is granted their first group 20/21/22 rating in a licence category an accepted and identified level of practical experience has been established by CASA. This is in accordance with the requirements of CAR 31(4)(c) and consistent with the minimum recommendations of ICAO Annex 1, Chapter 4.

The Airworthiness Advisory Circulars detail the hours of practical experience required by a person prior to the grant of an AME licence Group 20/21/22 type rating. A reduction is allowed for second and subsequent type ratings in a category.

This standard percentage reduction recognises the previous experience of a LAME but does not give credit for any close similarities between particular aircraft, aircraft systems or their engines.

Consequently, for a second (and subsequent) type rating in a category, practical experience should only need to be obtained in those areas of difference between the rating(s) already held and the new rating sought.

This practical experience can be achieved by successful completion of an approved Practical Consolidation Training (PCT) program, approved under CAR 30, which covers the type rating sought.

The objective of a PCT program is to provide an existing type rated LAME with the practical experience required to gain an additional type rating in the same category.

This document provides guidance for the development of a PCT program and the system of quality control required by CAR 30(2D) for organisations wishing to take advantage of this alternative method.

PCT program

GENERAL

An approved PCT program will provide structured on-job-training coupled with a period of service familiarisation for the applicable rating sought. The structured training element will be performed according to a type specific program. It includes training in maintenance of the aircraft, rigging, adjustments, replacement of line replaceable units, trouble shooting, rectification of minor defects and testing of systems.

The program provides a significant reduction to the existing practical experience requirement and this is validated by the introduction of an additional specific type oral examination conducted by CASA.

Since there are many possible combinations of LAMEs seeking an additional rating, an individual experience assessment process is incorporated in a PCT program.

The program is primarily designed for LAMEs seeking their second and subsequent type ratings in an AME licence category. However, an initial type rating applicant can gain a 25% reduction of the base hours schedule of experience by successful completion of a PCT course and oral examination.

OVERVIEW

An organisation's PCT program would come under the control of an appointed PCT responsible manager and comprise the following elements:

- SERVICE FAMILIARISATION, which is a minimum level of actual maintenance exposure required prior to attending a PCT program and is applicable to all LAME's seeking the type rating.
- an EXPERIENCE ANALYSIS, which will identify if any additional practical experience to the service familiarisation (Supplementary Tasks) is required prior to rating application,
- a PCT COURSE, which is a structured, on the job, practical training course applicable to the type rating, and

- PROGRAM AUDIT, conducted as part of the organisation's approved system of quality control.

After completing a PCT course CASA will conduct a PCT REVIEW with the LAME. This will comprise:

- a specific type subject oral examination, and
- a validation of the experience analysis outcomes.

The specific type oral examination is conducted by CASA. The training for that examination is a CAR 30 approved activity and must be conducted by a CAR30 COA holder.

If an organisation wishes to establish a PCT program they should:

- apply for, or seek a variation to include, a certificate of approval for "the training of candidates for examinations referred to in paragraph 31(4)(e)", and
- follow the guidance contained within this document.

Service familiarisation

Service familiarisation is the term used to describe the minimum level of actual on the job maintenance experience, applicable to the type rating, in which all LAMEs must participate prior to attendance on a PCT training program.

This practical maintenance experience should comprise a period of four (4) months for LAMEs with no recent, recorded, previous practical experience of aircraft and/or engines of comparable construction and systems. This service familiarisation period can be reduced to a minimum of one (1) month for LAMEs with such experience.

MINIMUM PERIOD

The actual period for an individual LAME will depend upon their previous experience, the complexity of the rating sought, and the similarity of that rating with existing ratings held. This will be determined during the experience analysis process. The period is based upon the person participating in maintenance applicable to the type rating sought on a daily or each shift contact basis.

MINIMUM LEVEL

During the service familiarisation period the engineer must gain a minimum amount of exposure to substantial maintenance tasks and/or scheduled maintenance checks greater than the daily inspection.

SUBSTANTIAL MAINTENANCE TASKS & SCHEDULED MAINTENANCE CHECKS

The minimum amount, i.e. scope and depth, of the maintenance experience required will be identified for each aircraft type rating for the organisation. This will be applicable to all LAMEs participating in a PCT program. Some LAME's may be required to complete additional tasks and/or show a longer period of service familiarisation. This may be as a result of either the experience analysis process conducted by the organisation or as an outcome of the PCT review conducted by CASA.

LAME's whose normal duties do not include the level of maintenance exposure required for the service familiarisation will need to participate in that maintenance at a location where it is conducted.

RECORDING

The service familiarisation, and any additional tasks, are to be recorded in either an existing CASA Group 20/21/22 Schedule of Experience (SOE) or the PCT SOE record sheet(s).

The minimum service familiarisation is to be completed prior to PCT course attendance. Any remaining task areas may be achieved at any time prior to rating application. Higher level checks (heavy/overhaul maintenance checks) will be given appropriate accreditation.

Engine ground running is not part of the PCT program. LAME's seeking an engine type rating will still be required to provide SOE records of engine ground run experience. Satisfactory completion of a flight simulator engine ground run training session may satisfy this experience requirement.

All LAMEs should continue to record any practical experience gained which they may wish to seek accreditation for in the future from CASA.

Experience analysis

The experience analysis process is aimed to give the individual LAME appropriate credit for their experience. It should identify if any other practical experience is required, in addition to the minimum level provided by the PCT course and service familiarisation.

The analysis is carried out on all persons prior to their PCT course attendance and ensures the PCT course entry criterion are satisfied by the proposed trainee.

EXPERIENCE SUMMARY

The following types of information should be documented and considered in the experience analysis of a LAME:

- experience to date on the aircraft or engine type,
- experience on similar aircraft or engine types,
- overall category/tradestream experience, and
- previous work environments, i.e. servicing, line maintenance, base maintenance or overhaul.

PROCEDURE

The experience analysis will be conducted by a person(s) identified in the program procedures, who is familiar with the requirements of the process within the PCT program. The experience of the LAME is to be verified in a summary document by a supervisory maintenance person who is personally aware of the LAME's capabilities, i.e. shift supervisor, base supervisor or chief engineer, senior category LAME, PCT trainer etc.

OUTCOMES

The experience analysis outcome will provide:

- the service familiarisation period for that LAME,
- any supplementary tasks required, and
- verification of the PCT course entry criteria.

This process should be supported by some form of rating to rating or ATA system (sub-system) comparison matrix, or other acceptable means.

The experience analysis for each trainee is to be retained with the PCT course records. A copy is to be given to the trainee and submitted to the Airworthiness Inspector at the PCT Review. All service familiarisation, and any supplementary tasks, are to be completed before licence rating application will be accepted.

SUPPLEMENTARY TASKS

Supplementary task may be required for:

- first exposure to an ATA chapter sub-system,
- first exposure to different control systems,
- first exposure to another manufacturers product, or
- first transition between wide body airliners, narrow body airliners, business jets or turboprops.

Further supplementary tasks may also be required by CASA as an outcome of the PCT review.

Supplementary tasks will normally only be required where there is a difference in the maintenance procedures or philosophy applicable to the type rating sought, that is not adequately covered by previous training and/or experience.

Supplementary tasks would normally comprise specific maintenance in an ATA chapter system. Any task(s) nominated should be readily achievable within 3 months of working in a location conducting regular scheduled maintenance checks on the aircraft or engine type.

PCT course

The PCT course is a structured, on the job, practical training course applicable to a type rating. It is lead and 100% supervised by a trainer and physically conducted at or on the applicable aircraft or engine type. It will be carried out at a CAR 30 approved maintenance organisation, or in particular circumstances at the aircraft and/or engine manufacturer, or a combination of both.

The course material comprises:

- **ATA CHAPTER HIGHLIGHTS**, which are a summary list of points to be used as memory joggers for discussion by the trainer during the conduct of tasks in each ATA chapter,
- **INSPECTION TASKS** in each ATA chapter where each main component and maintenance significant item in a system or structure is visually inspected and discussed, and
- **PERFORMANCE TASKS** in each ATA chapter, which is an operational, system or functional check, or a review of a specific maintenance task procedure.

All PCT courses will also include a hands-on review of:

- the applicable maintenance documentation, and
- any specialist tooling and test equipment that can be used in line maintenance activities.

OBJECTIVES

The PCT course is the formal practical training for the oral examination for that type rating.

The course objectives are:

- to be familiar with the safety precautions and operational and maintenance procedures related to the type rating, and
- to practically reinforce and consolidate the knowledge gained during the specific type theory course and the minimum service familiarisation.

The course objectives will be satisfied by:

- attending the entire course,
- being familiar with the safety precautions relevant to the type rating,
- participating in all inspection tasks and being familiar with the maintenance aspects of the system, component or structure inspected,
- participating in all performance tasks and being familiar with the checks and tests available utilising on-board equipment,
- being aware of the specialised tests, test equipment and tooling associated with the systems or structure applicable to the type rating, and
- being familiar with any significant differences associated with the type rating that are not commonly encountered in the category.

PROCEDURES

Any application to conduct a PCT activity needs to include the system of quality control that will be used to control the PCT program. The system of quality control may be incorporated in a PCT Program procedure document. The conditions of the training approval will be reflected by that document's approved procedures and approved PCT course(s). Each course shall:

- be approved by CASA,
- be conducted in dedicated training sessions where the aircraft or engine is available and accessible to the extent required by the course task content,
- commence within 6 months of successful completion of the specific type theory course, and
- be delivered in accordance with the conducting organisation's approved PCT procedures.

Training session(s) should be limited to a maximum of 6 hours actual training per day and should not normally extend beyond 0200 hours each day.

ENTRY CRITERIA

The entry criteria to a PCT course for a LAME seeking a second or subsequent type rating in a category is:

- hold examination credits for all the core and specific group technical subjects applicable to the type rating,
- hold the specific type written examination credit,
- have completed the minimum service familiarisation, and
- does not hold an outstanding PCT course oral examination credit for a rating yet to be granted.

In addition to the above, the entry criteria to a PCT course for an AME seeking their first type rating in a category is:

- have completed the general and category experience requirement for an AME licence.

Compliance with the entry criteria for a PCT course trainee is to be verified by the organisation during the experience analysis process. This will be confirmed prior to the oral examination by the Airworthiness Inspector conducting the PCT Review.

TRAINING RATIO

The maximum ratio for delivery of a PCT course is 6 trainees to 1 trainer. The actual training ratio proposed by an organisation for a specific PCT course will be assessed during that individual PCT course approval process. The assessment will take into consideration such things as the planned course delivery location(s), accessibility to the aircraft or engine and any additional trainee entry criteria proposed.

TRAINING LOCATIONS

Courses will normally be conducted at a maintenance facility where an operational aircraft is readily available to be utilised for the training session(s). An aircraft undergoing overhaul and/or a spare engine may be required for some tasks.

Any PCT course to be conducted at other than a main overhaul maintenance facility for the type may require adjustment of the course delivery timeframe and trainer/trainee ratio. These adjustments will be considered by CASA as required.

CASA NOTIFICATION

The organisation is to give CASA 14 days prior notice of the commencement of an approved PCT course. This notification will be given to AME Licensing, Canberra, and the local CASA district office responsible for the location where the PCT course is to be conducted. Arrangements can then be made for scheduling of the PCT Review, i.e. the oral examination and experience review, after completion of the course.

COURSE REVIEW

This process will utilise feedback from the trainer and trainees. It should provide on-going re-validation of the course delivery time, trainer performance, task content and program procedures. It should also be used as a mechanism to update the trainer ATA chapter highlights. The review process should be recorded and any follow up action initiated prior to further delivery of the course.

THIRD PARTY DELIVERY

Approved PCT courses may be provided for another organisation's LAMEs providing the PCT program procedures cover how this is to be controlled. The PCT course must adequately cover any significant difference(s) peculiar to the customer's aircraft or engine. A significant difference is a difference that:

- the ignorance of which could affect the safety of the aircraft or become a danger to person or property,
- introduces a change that affects a maintenance practice, or specific company procedure or requirement, or
- causes a different presentation of data, the understanding of which is a factor in determining aircraft serviceability.

Contact AME Licensing, Canberra, for further advice on third party delivery of PCT courses.

PCT trainer

A PCT course will be lead and supervised by a person identified and approved in the program procedures as a PCT trainer for that type rating.

The standard criteria for a PCT trainer is:

- licensed in the category group for >5 years and hold the type rating >18 months,
- have recent maintenance experience in that rating,
- completed a recognised "Train the Trainer" course, and
- completed the organisation's instruction in the PCT program.

A recognised train the trainer course is one that gains a "Workplace Trainer Category 1" accreditation, as endorsed by the National Training Board.

Trainer instruction in the PCT program should include:

- general description, definitions & terminology, and
- trainer responsibilities and course delivery.

The trainer will be issued a "PCT Trainer Course Delivery Guide". This is to be used as a reference document during the preparation and delivery of a PCT course.

CASA AME Licensing are to be advised when trainer PCT program instruction is to be held.

RESPONSIBILITIES

The PCT trainer should:

- be provided with adequate time to prepare and review the course documentation before the course starts,
- check the currency and effectivity of the course tasks,
- ensure all tasks are conducted in a manner that does not render the aircraft, engine or equipment unserviceable,
- record any interference with the aircraft or engine in the appropriate maintenance documentation,

- co-ordinate the training session tasks to aircraft availability, in conjunction with appropriate maintenance controller,
- monitor course progress within the planned timeframe,
- note any deficiencies in the course tasks or timeframe,
- note any additional ATA chapter highlight points to be added to the trainers course material,
- record trainee attendance,
- monitor trainee performance to ensure the course objectives are achieved,
- action the course documentation,
- have the authority to remove a trainee from the training group if that person is disruptive or refuses to comply with the program procedures, and
- have access to the PCT program procedures and undertake all tasks according to those procedures.

DELIVERY

The trainer will conduct the PCT course within the following guidelines:

- follow a logical, progressive task sequence, i.e.
 - (i) complete inspection tasks before the performance tasks in an ATA chapter section,
 - (ii) complete tasks in the common tradestream ATA chapters before any specific category ATA chapter system tasks, i.e. Chapter 29 before chapters 27 & 32; Chapter 36 before chapters 30 & 21, etc.,
- lead discussion in any available B.I.T.E. procedures and troubleshooting steps that could be taken following a typical fault report of the system or sub-system,
- emphasise any in-service difficulties in the task area and encourage the trainees to share any personal experience in the area,

- highlight any cautions & warnings, servicing, tooling & test equipment, rigging & adjustment and minimum equipment list or permissible unservicability maintenance significant areas related to the task,
- during inspection tasks ensure each trainee physically inspects each item, whilst the trainer refers to the appropriate system or structural schematic (if applicable) and leads discussion on the component's method of attachment and interface considerations with other structure, components or systems,
- during performance tasks ensure each trainee participates in the task, whilst the trainer refers to the system schematic or flight deck indications and leads discussion on the normal indications and any usual fault indications,
- reviewing specific tests, rigging or adjustment procedures whilst referring to the approved data, tooling or test equipment and the aircraft system, component or structure concerned, and
- whilst at or on the aircraft or engine working through the steps in the fault isolation manual or troubleshooting charts for a typical defect scenario.

TECHNICAL DIAGRAM USAGE

Some inspection task items are not readily accessible. In certain circumstances that item may be approved to be conducted by identifying the component's location within a specific area or behind a specific panel on the aircraft or engine. This must be carried out at the aircraft or engine location whilst referring to an approved detailed technical location diagram of the component.

This alternative can only be utilised for those inspection task items identified with the "diagram" option in the task list and when the component is not accessible during the training session. When a trainer needs to use this option particular care must be taken to ensure comprehensive discussion of any inspection considerations, adjustment or rigging points, method of attachment and connection to other components and structure relating to the inspection item.

If any inspection items where this alternative has been used later become accessible during the course then they should be revisited and physically inspected. Additionally, if a component can be accessed from spare parts holdings then the usage of the diagram option will be supplemented with inspection of the spare part.

PCT review

The PCT review is conducted by a CASA Airworthiness Inspector with each trainee following completion of a PCT course. It comprises two elements:

- an oral examination for the type rating, based on the PCT course content, and
- a review of the LAME's experience analysis and accumulated experience to date, to assess if any further experience is needed prior to rating application.

The PCT review should take place within 2 weeks of completing the course and will be conducted at the training location or AME Licensing, Canberra. Scheduling of the PCT review(s) will be done by arrangement with the training organisation and CASA.

ORAL EXAMINATION

The oral examination will comprise questions drawn from a library based on the PCT course content. The scope of this examination will be all ATA chapter areas relevant to the specific type rating. The examination will attract the appropriate examination fee.

The oral examination is conducted in the presence of an observer from the candidate's maintenance organisation. An experienced type rated LAME or PCT trainer would normally be used as the observer. The observer's role is to moderate the oral examination process. He or she may be requested to verify the accuracy of any non-standard answers given by the candidate to ensure the candidate is not disadvantaged in any way.

To be eligible to attend the oral examination you must have satisfied the course entry criteria, completed the PCT course, submitted the appropriate application form and paid the current fee.

The duration of the oral examination will depend on the scope, depth and complexity of the type rating. It may also be influenced by the responses given by the candidate and any need to expand on question topics. As a guide, the duration of the oral examination may vary between 30 and 120 minutes, depending on the rating[s] sought and candidate performance.

A record of the questions asked and the type of answer supplied will be maintained by the Airworthiness Inspector during the oral examination.

Successful completion of this examination will permit the practical experience reduction provided for by the approved PCT program.

EXAMINATION OUTCOMES

At the completion of the oral examination the candidate's responses are to be assessed by the Airworthiness Inspector to determine if the PCT course objectives have been achieved. The pass level is a minimum of 75% correct across the whole examination, with satisfactory performance in all subjects.

The examination result will be either:

- PASS
- FAILURE in part, unsatisfactory performance in a minority of subject areas, re-oral those subjects after one month. The Airworthiness Inspector may require additional experience to be gained in that subject(s) prior to conducting the oral re-examination.
- FAIL, unsatisfactory performance in the majority of subject areas, revert to the existing SOE or repeat the PCT program for that type rating.

The oral examination result will be recorded by the Airworthiness Inspector and copied to the candidate. A pass is required for any rating application relying on practical experience gained via an approved PCT program.

Upon successful completion of the oral examination a trainee not type rated in the category will be entitled to a 25% reduction in the base hours of the SOE for that rating. This will be recorded and signed by the Airworthiness Inspector in the ATA hourly requirement table of the person's schedule of experience.

EXPERIENCE REVIEW

At the commencement of the PCT review the Airworthiness Inspector will check the candidate's experience records to confirm that the PCT course entry criterion was satisfied.

After successful completion of the oral examination the LAME's experience analysis documentation is checked to confirm the appropriate service familiarisation allocation and any need for supplementary tasks.

The experience review will be recorded and provided to the LAME and their maintenance organisation.

ADDITIONAL LICENCE RATING APPLICATION

Application for an additional type rating in a category, based on the practical training and experience gained via an approved PCT program, requires evidence of the following:

- oral examination pass,
- all service familiarisation completed, and
- all supplementary tasks completed.

When applying for a rating all practical experience records related to that rating should be submitted with the application.

Responsible manager

The PCT responsible manager means the person who has corporate authority for ensuring that all PCT training commitments can be financed and carried out to the standard required by CASA. The responsible manager may delegate in writing the day to day management of a PCT program to a senior technical person(s) in the organisation but not the overall approved program management responsibility.

PCT program responsibilities include:

- course development,
- the experience analysis of course candidates,
- notification and co-ordination with CASA for the conduct of courses and oral examinations,
- trainer training, course conduct and review,
- documentation and record keeping,
- procedures amendment and internal audit.

Program audit

The internal audit of a PCT program is to enable the organisation to satisfy itself that it can deliver properly trained persons and that the organisation remains in compliance with CAR 30.

There are two elements to the quality system, namely an independent audit procedure and a management/control and follow up system.

INDEPENDENT AUDIT

The independent audit procedure is a process of routine sample checks of all aspects of the training organisation's ability to carry out the training to the required standards.

It represents an overview of the complete training system and does not replace the need for trainers to ensure that they carry out training to the required standard.

The independent audit procedure should ensure all key aspects of CAR 30 compliance are checked at least once in every 12 months and may be carried out as one complete single exercise or subdivided over a 12 month period in accordance with a scheduled plan.

A report should be raised each time an audit is carried out describing what was checked and any resulting negative findings. The report should be sent to the affected manager(s) for rectification action giving target rectification dates.

Possible rectification dates may be discussed with the affected manager(s) before the person responsible for the audit confirms such dates on the report. The affected manager(s) are required to rectify any negative findings and inform the person responsible for the audit of such rectification.

The independence of the audit system should be established by always ensuring audits are carried out by personnel not responsible for the function or procedure being checked. It therefore follows that a large training organisation should have or utilise a dedicated quality audit group whose sole function is to conduct audits, raise finding reports and follow up to ensure that findings are being rectified.

For the medium sized training organisation it is acceptable to use competent personnel from one section/department not responsible for the function or procedure to check the section/department that is responsible. This is subject to the overall planning and implementation being under the control of the quality manager.

AUDIT CONTROL AND FOLLOW UP

The management control and follow up system is the second part of the independent quality system. The principle function is to ensure all negative findings resulting from the audit system are corrected in a timely manner and to enable the responsible manager to remain properly informed of the state of compliance and any safety issues.

Apart from rectification of negative findings the responsible manager should hold routine meetings to check progress on rectification. In the case of large training organisations such meetings may be delegated on a day to day basis to the quality manager, as long as the responsible manager meets at least once per year with the senior staff involved to review the overall performance.

The PCT program will also be subject to system and product audits conducted by CASA and based on the cycle frequency identified for high capacity RPT operations.

Documentation

A PCT program requires various documents, forms and records to be created. These include:

- a procedures manual and trainer's course delivery guide,
- an experience analysis record,
- a trainer's type rating course manual(s) for each course,
- a trainee's type rating schedule of experience booklet,
- the trainer's course daily summary record,
- a course report, feedback and review record, and
- the PCT audit check list(s).

Records pertaining to a PCT program are to be retained for a minimum of 24 months.

SYSTEM OF QUALITY CONTROL PROCEDURES - GENERAL GUIDANCE

Documented quality procedures support:

- reliable performance - when something is supposed to happen it does, and
- consistent performance - when something is done it is done the right way without fail.

Procedures provide the framework to discipline and order work within which people can use their initiative and skills. Staff are best able to perform their function when they know what needs to be done. Procedures are written in terms of who shall do what and what shall be done.

However procedures are not static documents. Where staff find a better way of operating it is the responsibility of management to amend and have approved the documented procedure. Procedures are also upgraded through the internal audit and course review processes which capture improved practice.

Procedures follow a consistent format, as follows:

- Purpose - why the procedure is in place, what it is intended to do,
- Scope - when and where the procedure shall be applied,
- Responsibilities - who shall do what,
- Definitions - any peculiar or particular terms,
- References - any related procedures, standards or codes referred to in the procedure,
- Procedure - what actually shall be done, how it will be done, when and by whom,
- Documentation - instructions, forms and other papers used to perform and record the procedure, and
- Flowchart - captures the procedure in chart form.

PCT PROCEDURES MANUAL

The purpose of the PCT procedures manual is to ensure good training standards and compliance with all relevant requirements of the Civil Aviation Regulations. The procedures should describe the how, when, where, what, why and who for the specific processes in the program. They also include an audit process to monitor training standards and compliance with, and the adequacy of, the procedures. The audit procedures can be referenced to another approved document. Refer Annex A.

EXPERIENCE ANALYSIS RECORD

This record should contain a summary of the individual's experience, qualifications and past work environments and the outcome of the analysis process. Refer Annex B.

TRAINER'S COURSE DELIVERY GUIDE

This is a quick reference booklet for the trainer to use during the delivery of a PCT course. It should explain the responsibilities of the trainer and process methodology for conduct and delivery of the PCT course. It may also contain a general description of the organisation's PCT program.

TRAINER'S PCT COURSE MANUAL

The trainer's course manual is type rating specific and shall contain the following:

- DOCUMENTATION REVIEW,
- TOOLING AND TEST EQUIPMENT REVIEW,
- ATA CHAPTER HIGHLIGHTS in each ATA chapter to cover cautions & warnings, servicing, tooling & test equipment, rigging & adjustments and M.E.L./P.U.S. maintenance significant items. These items may be a part of the inspection and performance tasks or a separate listing,
- INSPECTION TASKS in each ATA chapter to cover the main components and maintenance significant items in a system or structure, and
- PERFORMANCE TASKS in each ATA chapter to cover an operational, system or functional check or maintenance procedure review.

Each performance task is to be allocated a task identifier (between 1 and 6) to indicate the maximum number of trainees in the group for delivery of that task. The letter "G" or "I" following the number indicates if the task can be carried out as a group exercise (G) or must be performed individually (I) by each trainee. Refer Annex C.

TRAINEE PCT SOE BOOKLET

The trainee PCT SOE booklet should contain a course task completion record, a list of the course tasks (with any approved inspection task alternate diagrams) and a PCT SOE record for service familiarisation and supplementary task recording. The course task completion record will have a certification block for the inspection and performance tasks in each ATA chapter. This to be completed by the PCT trainer who delivered that part of the course. It will also contain a final Certificate of Completion certification covering the entire PCT SOE document. This is to be completed by the trainee prior to rating application.

TRAINER'S PCT COURSE DAILY SUMMARY

The daily summary is to record trainee attendance and extent of the course completed during that training session. The sheet should also provide a method for the trainer to highlight any corrections, or recommendations for change, to the tasks completed in that training session. These to be evaluated in the course review process. Refer Annex D.

PCT COURSE REPORT

The course report will be completed at the conclusion of each PCT course. It shall contain the relevant details of the course, the trainer(s) and trainees details, and will be retained with the experience analysis records by the responsible manager as a record of the conduct and completion of a PCT course. Refer Annex E.

TRAINEE'S PCT COURSE FEEDBACK SHEET

The course feedback sheet provides an opportunity for the trainees to comment on the delivery and content of the PCT course. This provides a method of validating trainer performance, as viewed by the trainees, and monitoring course tasks for consideration in the course review. Refer Annex F.

COURSE REVIEW RECORD

This record will show that the course review process has been carried out, i.e. what items were evaluated and what follow up action was taken. It should reflect comment on the course delivery duration, trainer performance and task validity, based on information gained from the trainer daily summary sheets and trainee feedback sheets.

AUDIT CHECK LISTS

This list(s) should show the check items covered by the audit system applying to the PCT program. The audit process procedures and check lists can be referenced to another approved document.

FALSE STATEMENTS

All documents used in a PCT program that require a verification or certification signature are to contain the following statement:

Note: The attention of persons making and verifying entries in this document is drawn to the penalty provisions of CAR 283 regarding false statements. (Penalty: 50 penalty units)

Approval process

Approval of a PCT program consists of two processes:

- approval of an organisation's PCT program under CAR 30, and
- individual approval of each PCT course to be conducted by the organisation under that CAR 30 certificate of approval activity.

PCT PROGRAM APPROVAL

To be approved to conduct a PCT course you must hold a certificate of approval for "the training of candidates for examinations referred to in paragraph 31(4)(e)" and have suitable access to the maintenance facilities and the aircraft and/or engine for the type rating being trained.

When applying for, or seeking to vary, a certificate of approval to include this activity, or seeking to include a PCT program within your existing activity, you must submit a PCT program system of quality control (procedures document) in accordance with CAR 30(2D).

PCT program procedures should include the following:

- a statement signed by the responsible manager confirming that the program procedures and any associated manuals and documents defines the training organisations compliance with CAR 30 and will be complied with at all times,
- the name(s) of the position(s) occupied by the person(s) performing key functions in the program,
- the duties and responsibilities of the position(s) performing key functions in the program,
- a PCT program organisation chart showing associated chains of responsibility of the key function positions,
- a program process flowchart,
- a record of approved PCT trainers, courses & locations,
- a record of the approved minimum service familiarisation for each approved course,
- PCT program process and course conduct procedures that ensure good training standards and compliance with all the requirements of CAR 30 (2D),
- PCT program audit, and
- PCT Program procedures amendment procedure.

Key function personnel in a PCT program include the responsible manager, trainers, persons conducting the experience analysis, persons conducting the internal audit and personnel responsible for co-ordination and notification with CASA.

The certificate of approval application (or variation) is to be submitted to the CASA controlling office for your organisation for on forwarding to AME Licensing, Canberra, for assessment. Any subsequent amendments to the PCT program procedures must also be notified to CASA for approval.

An example PCT procedures manual format is contained in Annex A.

PCT COURSE APPROVAL

The following information and documents are required to be assessed for approval of a PCT course for a type rating:

- a written request for the assessment by the organisation's PCT program responsible manager,
- a course title that reflects the type rating,
- the trainee's PCT SOE booklet,
- proposed course duration by number and length of training sessions,
- proposed conduct locations and a description of the facilities available to facilitate PCT at those locations,
- proposed training group size (for each location if applicable),
- proposed minimum service familiarisation,
- details of proposed initial trainer(s),
- any proposed experience analysis guidance material for this rating, and
- a library of line maintenance level oral questions and answers drawn from the course material.

The question library scope will reflect the complexity of the type rating. The library will be retained by CASA as a basis for the PCT course oral examination library.

INSPECTION TASKS in a PCT course should identify each main component in an ATA chapter system. This will normally include line replaceable units (LRU's), serialised components, major structure and maintenance significant sub-assemblies.

If a component is not readily accessible, and direct inspection of it does not provide any additional learning or familiarisation, physically inspecting the component may be substituted with identifying it within a specific area or behind a specific panel on the aircraft or engine. This may be approved to be carried out utilising a detailed technical location diagram of the component. That diagram must adequately depict any inspection considerations, adjustments, rigging, method of attachment and connection to other components or structure. Any such proposed substitute diagram(s) must be supplied as part of the inspection task listings and must be identified as an alternative option against the particular inspection task item. The number of these diagrams approved for use with the inspection task items will be kept to a minimum.

PERFORMANCE TASKS should be targeted at the minimum required by all LAMEs to provide familiarity with the systems applicable to the type rating. Additional tasks that may be required for lesser experienced LAME's will be identified during the experience analysis process.

SERVICE FAMILIARISATION proposed must be substantiated. It should be a duration and depth that will give a good cross-section of work exposure to the rating and typically include what is normally done during an overnight scheduled maintenance check up to "C" check tasks or periodic inspections.

The PCT course details are to be submitted for assessment to AME Licensing, Canberra. Upon approval the course will be allocated a dedicated PCT course identification number, which is to be referenced on the PCT course documentation and future correspondence with CASA.

Before a PCT course can be approved the organisation must have their PCT program procedures assessed and approved. An example of the PCT course tasks format and level of detail is shown at Annex C.

Deviations From Normal PCT Requirements

CASA recognises that relief from the established and approved PCT procedures will be required from time to time. (eg. introduction of a new type would require that the PCT instructors be given relief from the “*licensed in the category group for >5 years and hold the type rating >18 months*” requirement if PCT is to be the method of satisfying practical experience requirements of licence issue).

Any deviations sought are to be submitted to the MPS section of CASA for assessment.

Sample Documents

The following annex documents are examples only. They show the type of information that should be recorded as part of the documentation and records for a PCT program.

The actual documents developed by an organisation may be modified or tailored to suit their individual needs, providing the necessary information is adequately recorded and evident from those documents and consistent with the guidance material in this document.

Example documents provided are:

Annex A Procedures Manual structure

Annex B Experience Analysis record

Annex C PCT Course Manual task layout

Annex D Course Daily Summary

Annex E Course Report

Annex F Course Feedback

Annex G PCT SOE record

ANNEX

- Annex A Procedures Manual structure
 - Annex B Experience Analysis record
 - Annex C PCT Course Manual task layout
 - Annex D Course Daily Summary
 - Annex E Course Report
 - Annex F Course Feedback
 - Annex G PCT SOE record
-

ANNEX A PCT Procedures Manual Structure example

PCT PROGRAM PROCEDURES MANUAL

INTRODUCTION

- Corporate commitment by responsible manager
- General description

MANAGEMENT

- Management personnel
- Duties and responsibilities of management personnel
- Management personnel organisation chart
- PCT program process flow chart
- List of PCT trainers
- Notification procedures regarding changes to organisation
- Manual(s) amendment procedure

PCT COURSE(S)

- Development..... Approval
- Review
- List of PCT courses approved..... Duration
- Conduct location(s)
- Training group size
- Trainers..... Qualifications
- Training

TRAINING PROCEDURES

- Service Familiarisation..... Task areas
- Substantial maintenance tasks & scheduled maintenance checks
- Recording
- Experience Analysis..... Assessment
- Outcomes
- PCT Course..... Entry criteria
- Objectives

PCT Trainer.....

- Responsibilities
- Course delivery
- PCT Trainee..... Responsibilities
- Oral Examination..... Observer
- Outcomes follow up

Third Party Delivery

NOTIFICATION AND COORDINATION

- Experience analysis
- PCT trainer training
- PCT course(s)
- Oral examination(s)

DOCUMENTATION

- Training material..... Trainers course delivery guide
- Trainers PCT course manual
- Trainees PCT SOE booklet
- Records of training carried out..... Experience analysis assessment
- Experience analysis reference material
- Course daily summary
- PCT course report
- Trainee feedback
- PCT course review

Storage of training records

QUALITY PROCEDURES

- Audit of training..... Schedule
- Checklists
- Remedial action..... Audit
- Course review

Responsible manager's annual review

APPENDICES

- Definitions
- Example of documents and forms used
- Trainer's course delivery guide

ANNEX B Experience Analysis Record example, single sheet front face Page 1 of 2

PCT PROGRAM EXPERIENCE SUMMARY RECORD				
Name:		Lic No/ARN:		Base:
Category:		Rating Sought:		
Group 20/21/22 Licence rating endorsements held				
AIRFRAMES	ENGINES	RADIO	ELECTRICAL	INSTRUMENT
Category Experience - Years holding a Group 20/21/20 rating in category				
Previous work environments - A/C or engine type - list by A/C type and category				
Transits and Daily Checks (list type only)	Scheduled Maintenance Checks (>100 hr cycle by type & category)		Heavy Maintenance areas or Engine/Module changes	
Summary of Experience on type for THIS rating from workplace exposure & SOE records				
Verified by (workplace supervisor):				
Name:.....		Signature		Date
Position:.....				

PCT PROGRAM EXPERIENCE ANALYSIS RECORD		
Name:	Lic No/ARN:	Base:
Category:	Rating Sought:	
SUPPLEMENTARY TASKS REQUIRED FROM EXPERIENCE ANALYSIS		
Assessed by		
Name:.....	Signature	Date
Position:.....		

Chapter 28 FUEL SYSTEMS

The following references are applicable to this system and are detailed in the appropriate maintenance publication.

CAUTIONS/WARNINGS
Coat fuel temp. probe with silicone grease when installing
Fuel pumps dangerous - Poisonous and explosive
Spills
Tank Entry/Venting

SERVICING
Refuel aircraft
Procedure for determining wing tank fuel quantity using dipsticks
Carry out fuel transfer

TOOLING/TEST EQUIPMENT
Plumb bob
Fuel quantity test box

RIGGING/ADJUSTMENT
D.C.T.U. replacement requires re-programming

MAINTENANCE M.E.L.'s
Fuel quantity indicators

Chapter 29 **HYDRAULIC POWER**

FLIGHT DECK

- P5 FLIGHT CONTROL PANEL
- P5 HYDRAULIC CONTROL PANEL
- P2/P3 HYDRAULIC PRESSURE & QUANTITY INDICATIONS

WHEEL WELL

- SYSTEM A RESERVOIR
 - QUANTITY INDICATOR AND TRANSMITTER
- SYSTEM B RESERVOIR
 - QUANTITY INDICATOR AND TRANSMITTER
- RESERVOIR PRESSURIZATION MODULE
 - CHARGE VALVE
 - DEPRESSURISATION VALVES (A/B)
- SYSTEM A/B PRESSURE MODULE
 - LOW PRESSURE SWITCHES
- SYSTEM A/B ELECTRIC MOTOR DRIVEN PUMP (EMDP)
 - ELECTRICAL CONNECTORS
 - TEMPERATURE SENSING SWITCH
- HYDRAULIC SUPPLY SHUTOFF VALVES (DIAGRAM optional)
 - VALVE POSITION INDICATOR
- STANDBY RESERVOIR
 - LOW LEVEL INDICATION SWITCH
- STANDBY PRESSURE MODULE
 - STANDBY RUDDER SHUTOFF VALVE
 - LEADING EDGE STANDBY SHUTOFF VALVE
 - LOW PRESSURE SWITCH
- STANDBY ELECTRIC DRIVEN PUMP
- POWER TRANSFER UNIT (PTU)
- PTU CONTROL VALVE
 - POSITION INDICATOR
 - PRESSURE LINE

ENGINE

Access via LH Fan cowl

- ENGINE DRIVEN HYDRAULIC PUMP
 - DEPRESSURIZATION SOLENOID

Chapter 27 FLIGHT CONTROLS			
G6	27-01	Review Flight Control Surface Rigging Tools	27-09-94/201-208
G6	27-02	Review Flight Control Cables Runs & Adjustment points	27-09-14/201-218
G6	27-03	Review Flight Control Trim Correction Troubleshooting	27-09-71/101-103 27-09-71/501
G3	27-04	Leading Edge Flap & Slat System Operational Test	27-81-00/501-513
With TE Flaps fully extended carry out the following			
G6	27-05	Flap Drive Lockout In-Flight Troubleshooting	27-51-00/101-105
G3	27-06	Leading Edge Symmetry Mismatch check	27-09-71/523/530
G6	27-07	Review Flap & Slat Hydraulic Fuses Reset	27-81-61/402-405
Carry out the following checks & tests			
G6	27-08	Review Elevator Tab Adjustment Following Flight Test procedures	27-31-00/539-544
G3	27-09	Spoiler Control System Operational Test	27-61-00/501-502
I3	27-10	Speed Brake Control System Operational test	27-62-00/501-502
G2	27-11	Aileron Power Control Units test	27-11-00/528-531
I2	27-12	Elevator & Tab Control System Operational test	27-31-00/501-503
I3	27-13	Stabiliser Trim Electric Actuator test	27-41-71/501-504
G3	27-14	Flight Controls Hydraulic Module test	27-09-21/501-502
G6	27-15	L.E. Flaps & Slats Deactivation from the T.E. Flaps	27-81-00/205-210

ANNEX E PCT Course Report example

PCT COURSE REPORT

Course No:..... Licence Category:..... Rating:.....
(BLOCK CAPITALS)

Dates Conducted:..... Total Days:.....

Location of Course:.....

Trainer/s Name: Lic.No/ARN:
.....
.....

Trainees:	NAME	HOME BASE	LIC.NO./ARN
1/
2/
3/
4/
5/
6/

Verification: The above listed persons have completed the Approved Practical Consolidation Training (PCT) Course No:.....

Responsible Manager:.....
NAME TITLE

Signature:..... Date:.....

Note: The attention of persons making and verifying entries in this document is drawn to the penalty provisions of CAR 283 regarding false statements. (Penalty: 50 penalty units)

ANNEX F PCT Course Feedback example

PCT COURSE FEEDBACK

Course No:..... Licence Category:..... Rating:.....
(BLOCK CAPITALS)

Comments on Specific Tasks:
(Quote task number &/or AMM ref.)

.....
.....
.....
.....
.....
.....
.....
.....

Procedural Comments

.....
.....
.....
.....
.....
.....
.....
.....

General Comments/Suggestions

.....
.....
.....
.....
.....

NAME:..... CONTACT TEL NO.....

PCT SCHEDULE OF EXPERIENCE RECORD

Licence Category Endorsement

Applicants

Full Name ARN/Lic.No.....
 (BLOCK CAPITALS)

NOTES:

- (1) **Purpose of SOE Record** - Applicants for a second or subsequent Group 20/21/22 rating in a category, who gain the required practical experience through an approved Practical Consolidation Training (PCT) Program, are required to produce evidence of completion of the Service Familiarisation and any Supplementary Tasks assessed by the Experience Analysis. This record sheet is a means of recording this experience, and any other practical experience that the LAME gains, prior to the licence endorsement application.
- (2) **Responsibility** - The Applicant is to fill in the Licence Category, Type Rating, Name and ARN/Lic.No. blocks. The Signature, Date block and number of pages are to be completed on the date of Licence endorsement application.
- (3) **Certification** - Only the LAME who certifies for the actual maintenance task can certify for the SOE task item, when (s)he is satisfied that the applicant has satisfactorily carried out the task.
- (4) **Verification** - Applicants and Certifying LAME's should note that experience claimed may be verified and penalties can apply for false statements as per CAR 283.

I hereby declare that the information given on this form is true in every respect.

Signature Date

Aircraft Registration	Details of Work Undertaken	Date(s) Work Undertaken	Name, Date, Signature and AME Lic.No. of Person Certifying for the Work Undertaken

PCT SCHEDULE OF EXPERIENCE RECORD

I hereby declare that the information given on this form true in every respect.

Signature Date

Aircraft Registration	Details of Work Undertaken	Date(s) Work Undertaken	Name, Date, Signature and AME Lic. No. of Person Certifying for the Work Undertaken

Note: The attention of persons making and verifying entries in this document is drawn to the penalty provisions of CAR 283 regarding false statements. (Penalty: 50 penalty units)