

SECTION H

TYPE RATINGS

- ◆ H1 Introduction
- ◆ H2 Aircraft Type Ratings & Group Ratings
- ◆ H3 Part-147 Approved Type Training
- ◆ H4 Non Part-147 Direct Course Approvals
- ◆ H5 Diesel Piston Engines
- ◆ H6 Aircraft Type Training
- ◆ H7 Aircraft Type Training and Examination Standard
- ◆ H8 Aircraft Type Experience Requirement
- ◆ H9 Type Rating Limitations & Removal
- ◆ H10 Making Your Application
- ◆ H11 If Your Application Fails

- ◆ Appendix A Category A Minor Scheduled Line Maintenance Tasks
- ◆ Appendix B Type Training and Examination Standard
- ◆ Appendix C Aircraft Type Practical Experience List of Tasks

H1 INTRODUCTION

Holders of Part-66 Aircraft Maintenance Licences in Category B1, B2 and C may apply for inclusion of an Aircraft Type Rating subject to meeting the relevant requirements. A Category A licence does not contain type ratings.

In order that a Part-145 or Part M maintenance organisation can issue a certification authorisation to a Part-66 licence holder in categories B1 and B2 the relevant type rating must be held. Without the relevant type rating and authorisation, the licence holder cannot sign the Certificate of Release to Service for work carried out on the aircraft.

Note: There are additional requirements to be satisfied for authorisation issue. ‘Certification Authorisation’ means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may sign certificates of release to service within the limitations stated in such authorisation on behalf of the approved organisation.

H2 AIRCRAFT TYPE RATINGS & GROUP RATINGS

The CAA issue type ratings and group ratings in accordance with Part-66.

H2.1 Type Ratings

Type Ratings are issued in accordance with Part-66, Appendix III. The type rating list can be found on the CAA web site.

Individual type ratings will be granted following completion of appropriate training, examination and experience requirements.

H2.2 Manufacturer Group Ratings

Manufacturer group ratings may be granted after complying with the type rating requirements of two aircraft types **representative of the group** from the same manufacturer. (See two examples below).

Types Endorsed		Manufacturer Group Rating (as appears on licence)
Piper PA22 + Piper PA38	=	Piper – Aeroplane single piston engine – metal structure

Types Endorsed		Manufacturer Group Rating (as appears on licence)
Cessna 310 + Cessna 414	=	Cessna – Aeroplane multi piston engine – metal structure

H2.3 Full Group Ratings

Full group ratings may be granted after complying with the type rating requirements of three aircraft types **representative of the group** from different manufacturers. (See example below).

Types Endorsed		Full Group Rating (as appears on licence)
Piper PA22 + Cessna C175 + Beech 33	=	Group – Aeroplane single piston engine – metal structure

Note 1: No full group rating may be granted to B1 multiple turbine engine aeroplanes, where only manufacturer group rating applies.

Note 2: Aircraft types representative of the group is defined - below.

B1 – the aircraft type should include typical systems and engines relevant to the group (i.e. retractable undercarriage, pressurisation, variable pitch propeller, etc. for the single piston engine metal subgroup).

B2 – the aircraft type should include complex avionics systems (i.e. radio coupled autopilot, EFIS, flight guidance systems, etc.).

Note 3: A ‘multiple engines’ group will automatically include the corresponding ‘single engine’ group (i.e. a licence holder with ‘Cessna – Aeroplane multi piston engine – metal structure’, will automatically receive ‘Cessna – Aeroplanes single piston engine – metal structure’).

H3 PART-147 APPROVED TYPE TRAINING

A list of Part-147 Approved Type Training Organisations can be found on our web site; however, prospective users of training should check the status of the courses with the organisation concerned.

H3.1 Category A

In respect of the Category A licence, authorisations will be granted following completion of the relevant category A task training carried out by the appropriately approved organisation. The training will include practical hands-on training and theoretical training appropriate for each task authorised.

Specific training on each aircraft type will be required reflecting the authorised task(s).

A list of Category A minor scheduled line maintenance tasks can be found in Appendix A to this Section.

H3.2 Category B1 and B2

Part-147 training should include theoretical and practical elements in relation to the licence privileges. Theoretical and practical training must comply with Part-66, Appendix III. This training coupled with relevant type experience is a prerequisite for licence type endorsement and forms the basis for a Part-145 Authorisation to be issued.

H3.3 Category C

Type training for Category C must comply with Part-66, Appendix III. Category C applicants who have qualified

by holding an academic degree must take the first aircraft type theoretical training at Category B1 or B2 level. Practical training is not required.

H4 NON PART-147 DIRECT COURSE APPROVALS

Part-66 allows for direct approval of a type course towards the grant of a type rating without having Part-147 approval. However, the course criteria must be to the same standards as Part-147. Applicants applying under a direct course approval must ensure that the CAA has granted approval to the relevant Operator, Training or Maintenance Organisation, prior to embarking on the course, as courses will not be retrospectively approved. Further information on approved training maintenance organisations can be found in Section K.

H5 DIESEL PISTON ENGINES

Regulation (EC) No. 2042/2003 Annex III, Part-66, Module 16, includes diesel engine technology in the syllabus. Whilst current BCAR Section L Category C (piston engine) licence holders will not be required to pass a differences examination in these areas to convert to a Part-66 licence, in order to certify for diesel engines, a type training course on diesel technology piston engines must be completed to EASA Part-147 standard or by UK CAA direct course approval. Following this training an appropriate period of experience, typically 6 months, should be demonstrated on the engine type to qualify for the type rating addition. If recognised type training has not been completed on the specific engine type, a BCAR Section L Category C (piston engine) licensed engineer will have to demonstrate an extended period of 12 months experience on the diesel engine type. In this case in order to qualify for this type addition, an oral examination may also be required.

H6 AIRCRAFT TYPE TRAINING

Aircraft type training may be sub-divided into airframe, power plant or electrical/avionic systems and the organisation may be approved to conduct all or only one of the sub-sections above.

Airframe type training means type training including all relevant aircraft structure and systems, excluding the bare engine.

Power plant type training means type training on the bare engine, including the build-up to a quick engine change unit.

Note: Where a split course is used one element of the two courses must contain the engine/airframe interface.

Avionic systems type training means type training on avionics systems.

H7 AIRCRAFT TYPE TRAINING AND EXAMINATION STANDARD

H7.1 Category A

Satisfactory completion of training will be determined by an approved procedure laid out in the organisation's exposition and in accordance with Part-147, demonstrated by an examination and/or by a workplace assessment, carried out by either an approved Part-145 organisation or a Part-147 training organisation. The practical assessment will determine a person's competence to perform task(s). The examiner will provide a written report to explain whether a candidate has passed or failed.

H7.2 Category B1, B2 and C

The completion of aircraft type training will be demonstrated by a multi-choice written examination carried out by a Part-147 organisation.

Note: Appendix B gives guidance regarding training standards required.

H8 AIRCRAFT TYPE RATING EXPERIENCE REQUIREMENT

Part-66 requires that a satisfactory amount of experience is required for an aircraft rating, in addition to the training. As a guide, 4 months is considered to be acceptable although the experience required will largely depend on the licence(s) and rating(s) already held. Where a similar aircraft type is held to that which is being applied for, experience can be reduced however, the experience should not be less than two weeks.

For each application, the CAA will need to satisfy itself that the practical training is of sufficient duration before adding a type rating.

H8.1 Acceptable Type Rating Experience

There are three types of experience that are deemed to be acceptable, as detailed below.

- Experience gained during an approved Part-147 training course. This experience should be detailed in logbook format and supported by the appropriate Part-147 certificate.
- Experience gained in an approved Part-145 maintenance organisation (OJT - On Job Training). Again this experience should be

detailed in logbook format, however, worksheets that are certified by an Assessor and cross-referred to on the Form 19 (SRG/1014) will be accepted.

- Any experience gained in an organisation that has been officially accepted by the Personnel Licensing Department. This experience must again be detailed in logbook format or worksheets that are suitably certified.

Note: Appendix C provides guidance regarding practical experience requirements for type addition.

H9 TYPE RATING LIMITATIONS & REMOVAL

Where limitations are held on a basic licence, they will automatically be applied to the type ratings contained within that licence. In all cases any limitations must first be lifted from the basic licence before being lifted from a type rating or ratings. However, both can be removed at the same time. Application must be made in respect of both the basic licence and the type rating on form SRG/1014.

H9.1 Requirements for Removal of Limitation(s) from Type Rating

A Part-147 type training course is required covering the areas to which the limitation(s) apply. Only full courses are approved under Part-147, however the applicant will only be required to attend the relevant parts of the course, according to the limitation (i.e. a licence holder with limitation 10 (Excluding Airframe) will only be required to attend this part of the course)).

The experience requirement is the same as for an additional type rating. (Refer to Section H4).

H10 MAKING YOUR APPLICATION

Form 19 (SRG/1014) should be used in respect of all type rating applications. Current forms may be downloaded from our web site (www.srg.caa.co.uk). A guidance document that is linked to the application form will provide easy to follow guidance on the licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Section A, Appendix B.

H10.1 Supporting Documents

Course Completion Certificates – covering both theoretical and practical elements, issued by CAA approved organisations or Part-145/147 organisations in other Member States

Logbook – containing work tasks. Details appropriate to the application being made, clearly identified and validated by an authorised signatory.

Worksheets - detailing tasks undertaken and certified by a suitably qualified person.

Note: Having clear concise supporting data will enable us to issue licences more effectively and

with less risk of errors or rejections. This supporting documentation may be referred to on Application Form 19.

H11 **IF YOUR APPLICATION FAILS**

Please refer to Section B18.

APPENDICES TO SECTION H

- ◆ **Appendix A** **Category A Minor Scheduled Line Maintenance Tasks**
- ◆ **Appendix B** **Type Training and Examination Standard**
- ◆ **Appendix C** **Aircraft Type Practical Experience List of Tasks**

APPENDIX A **CATEGORY A MINOR SCHEDULED LINE MAINTENANCE TASKS**

The definition of minor scheduled line maintenance tasks is any minor scheduled inspection or check up to and including a weekly check specified in the operators approved aircraft maintenance programme.

Training will be completed before the appropriate tasks are permitted to be carried out by the Category A licence holder.

Replacement of wheel assemblies.

Replacement of wheel brake units.

Replacement of emergency equipment.

Replacement of ovens, boilers and beverage makers.

Replacement of internal and external lights, filaments and flash tubes.

Replacement of windscreen wiper blades.

Replacement of passenger and cabin crew seats, seat belts and harness.

Closing of cowlings and refitment of quick access inspection panels.

Replacement of toilet system components but excluding gate valves.

Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure.

Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items.

Replacement of static wicks.

Replacement of aircraft main and APU aircraft batteries.

Replacement of in-flight entertainment system components but excluding public address.

Routine lubrication and replenishment of all system fluids and gases.

The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the competent authority as a simple task.

Replacement of any other components as agreed by the Agency for a particular aircraft type only where it is agreed that the task is simple.

Note: This list will be updated in accordance with Part 145.A.30 (g).

APPENDIX B TYPE TRAINING AND EXAMINATION STANDARD

Type training levels

The three levels listed below define the objectives that a particular level of training is intended to achieve.

Level 1 General familiarisation

A brief overview of the airframe, systems and powerplants as outlined in the Systems Description Section of the Aircraft Maintenance Manual.

Course objectives: Upon completion of the course, the student will be able to identify safety precautions related to the airframe, its systems and powerplant.

- 1) Identify maintenance practices important to the airframe, its systems and powerplant.
- 2) Define the general layout of the aircraft's major systems.
- 3) Define the general layout and characteristics of the powerplant.
- 4) Identify special tooling and test equipment used with the aircraft.

Level 2 Ramp and transit

Basic system overview of controls, indicators, principal components including their location and purpose, servicing and minor troubleshooting.

Course objectives: In addition to the information contained in the Level 1 General Familiarisation course, at the completion of this Level 2 Ramp and Transit training, the student will be able to:

- 1) Recall the safety precautions to be observed when working on or near the aircraft, powerplant and systems.
- 2) Demonstrate knowledge of the main ramp and transit (through pre-flight) activities of the following:
 - a) Doors, windows and hatches
 - b) Electrical power supplies.
 - c) Fuel
 - d) Auxiliary power unit
 - e) Powerplant
 - f) Fire protection

- g) Environmental Control System
 - h) Hydraulic power
 - i) Landing gear
 - j) Flight controls
 - k) Water/waste
 - l) Oxygen
 - m) Flight and service interphone
 - n) Avionics
 - o) Cabin equipment/furnishings
- 3) Describe systems and aircraft handling particularly access, power availability and sources.
 - 4) Identify the locations of the principal components.
 - 5) Explain the normal functioning of each major system, including terminology and nomenclature.
 - 6) Perform the procedures for ramp and transit servicing associated with the aircraft for the following systems: Fuel, Power Plants, Hydraulics, Landing Gear, Water/Waste, Oxygen.
 - 7) Demonstrate proficient use of crew reports and on-board reporting systems (minor troubleshooting) and determine aircraft airworthiness per the MEL/CDL.
 - 8) Identify and use appropriate documentation.
 - 9) Locate those procedures for replacement of components for ramp and transit activities identified in objective 2.

Level 3 Line and base maintenance training

Detailed description, operation, component location, removal/installation and bite and troubleshooting procedures to maintenance manual level.

Course objectives: In addition to the information contained in Level 1 and Level 2 training, at the completion of Level III Line and Base Maintenance training, the student will be able to:

- a) Perform system, engine, component and functional checks as specified in the maintenance manual.

- b) Correlate information for the purpose of making decisions in respect of fault diagnosis and rectification to maintenance manual level.
- c) Describe procedures for replacement of components unique to aircraft type.

After the first type course for category C certifying staff all subsequent courses need only be to level 1.

Theoretical element

Type training standard

Type training must include a theoretical and practical element.

Theoretical element

As a minimum the elements in the syllabus below are specific to the aircraft type must be covered. Additional elements introduced due to technological changes shall also be included.

Introduction Module Title
General aircraft (dimensions/weights MTOW etc.)
Time limits/maintenance checks
Levelling and weighing
Towing and taxiing
Parking/mooring
Servicing
Standard practices - only type particular
B2 module - safety items/mechanical interface
B1 module - safety items/avionics interface

Training levels are those levels defined in paragraph 1 above.

	Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
	B1	C	B1	C	B1	C	B1	C	B2
Blade tracking and vibration analysis	-	-	-	-	3	1	3	1	-
Transmissions	-	-	-	-	3	1	3	1	-
Airframe structure	-	-	-	-	3	1	3	1	1
Main rotor	-	-	-	-	3	1	3	1	-
Tail rotor/rotor drive	-	-	-	-	3	1	3	1	-
Rotor flight control	-	-	-	-	3	1	3	1	-
Airframe structure	3	1	3	1	-	-	-	-	1
Fuselage doors	3	1	3	1	-	-	-	-	-
Fuselage	3	1	3	1	-	-	-	-	-
Fuselage windows	3	1	3	1	-	-	-	-	-
Wings	3	1	3	1	-	-	-	-	-
Stabilisers	3	1	3	1	-	-	-	-	-
Flight control surfaces	3	1	3	1	-	-	-	-	-
Nacelles/pylons	3	1	3	1	-	-	-	-	-
Zonal & Station identification systems	1	1	1	1	1	1	1	1	1
Air supply	3	1	3	1	3	1	3	1	1
Air conditioning	3	1	3	1	3	1	3	1	1
Pressurisation	3	1	-	-	-	-	-	-	1
Safety & warning devices	3	1	-	-	-	-	-	-	1
Instrument systems	3	1	3	1	3	1	3	1	3
Avionics systems	2	1	2	1	2	1	2	1	3
Electrical power	3	1	3	1	3	1	3	1	3

Equipment & furnishings	3	1	3	1	3	1	3	1	-
Electronic emergency equipment requirement & cabin entertainment equipment	-	1	-	-	-	-	-	-	3
Fire protection	3	1	3	1	3	1	3	1	1
Flight controls	3	1	3	1	3	1	3	1	2
System operation: Electrical/ Fly-by-wire	3	1	-	-	-	-	-	-	3
Fuel systems	3	1	3	1	3	1	3	1	1
Hydraulic power	3	1	3	1	3	1	3	1	1
Ice & rain protection	3	1	3	1	3	1	3	1	1
Landing gear	3	1	3	1	3	1	3	1	1
Lights	3	1	3	1	3	1	3	1	3
Oxygen	3	1	3	1	-	-	-	-	1
Pneumatic/Vacuum	3	1	3	1	3	1	3	1	1
Water/Waste	3	1	3	1	3	1	3	1	1
On-board maintenance systems	3	1	3	1	-	-	-	-	3

Turbine Engines

Constructional arrangement and operation	-	-	-	-	-	-	-	-	1
Engine performance	3	1	-	-	3	1	-	-	1
Inlet	3	1	-	-	3	1	-	-	-
Compressors	3	1	-	-	3	1	-	-	-
Combustion section	3	1	-	-	3	1	-	-	-
Turbine section	3	1	-	-	3	1	-	-	-
Exhaust	3	1	-	-	3	1	-	-	-
Bearings & seals	3	1	-	-	3	1	-	-	-
Lubricants & fuels	3	1	-	-	3	1	-	-	-
Lubrication systems	3	1	-	-	3	1	-	-	-
Fuel systems	3	1	-	-	3	1	-	-	1
Engine controls	3	1	-	-	3	1	-	-	1
FADEC	2	1	-	-	2	1	-	-	3
Air systems	3	1	-	-	3	1	-	-	-
Starting & Ignition systems	3	1	-	-	3	1	-	-	-
Engine indicating systems	3	1	-	-	3	1	-	-	3
Power augmentation systems	3	1	-	-	-	-	-	-	-
Turbo-prop engines	3	1	-	-	-	-	-	-	-
Turbo-shaft engines	-	-	-	-	3	1	-	-	-
Auxiliary power units (APUs)	3	1	-	-	-	-	-	-	1
Powerplant installation	3	1	-	-	3	1	-	-	-
Fire protection systems	3	1	-	-	3	1	-	-	1
Engine monitoring & Ground operation	3	1	-	-	3	1	-	-	-
Engine storage & Preservation	3	1	-	-	3	1	-	-	-

Piston Engines

Engine performance	-	-	3	1	-	-	-	1	1
--------------------	---	---	---	---	---	---	---	---	---

Engine construction	-	-	3	1	-	-	3	1	1
Engine fuel systems	-	-	3	1	-	-	3	1	1
Carburettors	-	-	3	1	-	-	3	1	-
Fuel injection systems	-	-	3	1	-	-	3	1	1
Engine controls	3	1	-	-	3	1	-	-	1
FADEC	-	-	2	1	-	-	2	1	3
Starting & Ignition systems	-	-	3	1	-	-	3	1	-
Induction, Exhaust & Cooling systems	-	-	3	1	-	-	3	1	-
Supercharging/Turbocharging	-	-	3	1	-	-	3	1	-
Lubricants & fuels	-	-	3	1	-	-	3	1	-
Lubrication systems	-	-	3	1	-	-	3	1	-
Engine indication systems	-	-	3	1	-	-	3	1	3
Powerplant installation	-	-	3	1	-	-	3	1	-
Engine monitoring & Ground operation	-	-	3	1	-	-	3	1	-
Engine storage & Preservation	-	-	3	1	-	-	3	1	-

Propellers

Propeller - General	3	1	3	1	-	-	-	-	1
Propeller construction	3	1		1	-	-	-	-	-
Propeller pitch control	3	1	3	1	-	-	-	-	-
Propeller synchronising	3	1	3	1	-	-	-	-	-
Propeller electronic control	2	1	2	1	-	-	-	-	1
Propeller ice protection	3	1	3	1	-	-	-	-	-
Propeller maintenance	3	1	3	1	-	-	-	-	-

Practical element

The practical training element must consist of the performance of representative maintenance tasks and their assessment, in order to meet the following objectives:

- a) Ensure safe performance of maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc. if required.
- b) Correctly use all technical literature and documentation for the aircraft.
- c) Correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity.

Type training examination standard

Where aircraft type training is required, the examination must be written and comply with the following:

- 1) Format of the examination is of the multiple choice type. Each multiple choice question must have three alternative answers of which only one must be the correct answer. The time for answering is based upon a nominal average of 120 seconds per level 3 question and 75 seconds per level 1 and 2 question.
- 2) The examination must be of the closed book type. No reference material is permitted. An exception will be made for the case of examining a B1 or B2 candidate's ability to interpret technical documents.
- 3) The number of questions must be at least one question per hour of instruction subject to a minimum of two questions per syllabus subject. The competent authority of the member state will assess number and level of questions on a sampling basis when approving the course.

- 4) The examination pass mark is 75%.
- 5) Penalty marking is not to be used to determine whether a candidate has passed.
- 6) End of module phase examinations cannot be used as part of the final examination unless they contain the correct number and level of questions required.

Type examination standard

Where type training is not required, the examination must be oral, written or practical assessment based, or a combination thereof.

Oral examination questions must be open.

Written examination questions must be essay type or multiple choice questions.

Practical assessment must determine a person's competence to perform a task.

Examination subjects must be on a sample of subjects drawn from paragraph 2 type training/examination syllabus, at the indicated level.

The examination must ensure that the following objectives are met:

- a) Properly discuss with confidence the aircraft and its systems.
- b) Ensure safe performance of maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc. if required.
- c) Correctly use all technical literature and documentation for the aircraft.
- d) Correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity

A written report must be made by the examiner to explain why the candidate has passed or failed.

APPENDIX C **AIRCRAFT TYPE PRACTICAL EXPERIENCE LIST OF TASKS**

Type/task training and ratings

For aircraft as defined in Part-66.A.45(h) type experience should cover an acceptable cross section of tasks. For the first aircraft type of each manufacturer group, at least 50% of the tasks, as applicable to the concerned aircraft type and licence category, should be performed. For the second aircraft type of each manufacturer group, this may be reduced to 30%. For subsequent aircraft types of each manufacturer group, this may be reduced to 20%.

Type experience should be demonstrated by the submission of records or logbook showing the tasks performed by the applicant as specified by the competent authority.

Time limits/Maintenance checks

- 100 hour check (general aviation aircraft)
- "B" or "C" check (transport category aircraft)
- Review of records for compliance with airworthiness directives
- Review records for compliance with component life limits
- Procedure for inspection following heavy landing
- Procedure for inspection following lightning strike

Dimensions/Areas

- Locate component(s) by station number
- Perform symmetry check

Lifting and shoring

Assist in:

- Jack aircraft nose or tail wheel
- Jack complete aircraft
- Sling or trestle major component

Levelling/weighing

- Level aircraft
- Weigh aircraft
- Prepare weight and balance amendment
- Check aircraft against equipment list

Towing and taxiing

- Tow aircraft
- Be part of aircraft towing team

Parking and mooring

- Tie down aircraft
- Park, secure and cover aircraft
- Position aircraft in dock

- Secure rotor blades

Placards and markings

- Check aircraft for correct placards
- Check aircraft for correct markings

Servicing

- Refuel aircraft
- Defuel aircraft
- Check tyre pressures
- Check oil level
- Check hydraulic fluid level
- Check accumulator pressure
- Charge pneumatic system
- Grease aircraft
- Connect ground power
- Service toilet/water/system
- Perform pre-flight/daily check

Vibration and noise analysis

- Analyse helicopter vibration problem
- Analyse noise spectrum

Air conditioning

- Replace combustion heater
- Replace outflow valve
- Replace vapour cycle unit
- Replace air cycle unit
- Replace cabin blower
- Replace heat exchanger
- Replace pressurisation controller
- Clean outflow valves
- Check operation of air conditioning/heating system
- Check operation of pressurisation system
- Troubleshoot faulty system

Auto flight

- Install servos
- Rig bridle cables
- Replace controller
- Replace amplifier
- Check operation of auto-pilot
- Check operation of auto-throttle
- Check operation of yaw damper
- Check and adjust servo clutch
- Perform autopilot gain adjustments
- Perform mach trim functional check
- Troubleshoot faulty
- Check autoland system
- Check flight management systems
- Check stability augmentation system

Communications

- Replace VHF com unit
- Replace HF com unit
- Replace existing antenna
- Replace static discharge wicks
- Check operation of radios
- Perform antenna VSWR check
- Perform Selcal operational check
- Perform operational check of passenger address system
- Functionally check audio integrating system
- Repair co-axial cable
- Troubleshoot faulty system

Electrical Power

- Charge lead/acid battery
- Charge ni-cad battery
- Check battery capacity
- Deep-cycle ni-cad battery
- Replace generator/alternator
- Replace switches
- Replace circuit breakers
- Adjust voltage regulator
- Amend electrical load analysis report
- Repair/replace electrical feeder cable
- Troubleshoot faulty system

Equipment/Furnishings

- Replace carpets
- Replace crew seats
- Replace passenger seats
- Check inertia reels
- Check seats/belts for security
- Check emergency equipment
- Check ELT for compliance with regulations
- Repair toilet waste container
- Repair upholstery
- Change cabin configuration

Fire protection

- Check fire bottle contents
- Check operation of warning system
- Check cabin fire extinguisher contents
- Check lavatory smoke detector system
- Install new fire bottle
- Replace fire bottle squib
- Troubleshoot faulty system
- Inspect engine fire wire detection systems

Flight controls

- Replace horizontal stabiliser
- Replace elevator
- Replace aileron
- Replace rudder
- Replace trim tabs
- Install control cable and fittings
- Replace flaps

- Replace powered flying control unit
- Replace flat acuator
- Adjust trim tab
- Adjust control cable tension
- Check control range and sense of movement
- Check for correct assembly and locking
- Troubleshoot faulty system

Fuel

- Replace booster pump
- Replace fuel selector
- Replace fuel tank cells
- Check filters
- Flow check system
- Check calibration of fuel quantity gauges
- Check operation feed/selectors
- Troubleshoot faulty system

Hydraulics

- Replace engine driven pump
- Replace stand-by pump
- Replace accumulator
- Check operation of shut off valve
- Check filters
- Check indicating systems
- Perform functional checks
- Troubleshoot faulty system

Ice and rain protection

- Replace pump
- Replace timer
- Install wiper motor
- Check operation of systems
- Troubleshoot faulty system

Indicating/recording systems

- Replace flight data recorder
- Replace cockpit voice recorder
- Replace clock
- Replace master caution unit
- Replace FDR
- Perform FDR data retrieval
- Troubleshoot faulty system
- Implement ESDA procedures
- Inspect for HIRF requirements

Landing gear

- Build up wheel
- Replace main wheel
- Replace nose wheel
- Replace shimmy damper
- Rig nose wheel steering
- Replace shock strut seals
- Replace brake unit
- Replace brake control valve
- Bleed brakes
- Test anti skid unit
- Test gear retraction

- Change bungees
- Adjust micro switches
- Charge struts
- Troubleshoot faulty system
- Test outbrake system

Lights

- Repair/replace rotating beacon
- Repair/replace landing lights
- Repair/replace navigation lights
- Repair/replace interior lights
- Repair/replace emergency lighting system
- Perform emergency lighting system checks
- Troubleshoot faulty system

Navigation

- Calibrate magnetic direction indicator
- Replace airspeed indicator
- Replace altimeter
- Replace air data computer
- Replace VOR unit
- Replace ADI
- Replace HSI
- Check pitot static system for leaks
- Check operation of directional gyro
- Functional check weather radar
- Functional check doppler
- Functional check TCAS
- Functional check DME
- Functional check ATC transponder
- Functional check flight director system
- Functional check inertial nav system
- Complete quadrantal error correction of ADF system
- Update flight management system database
- Check calibration of pitot static instruments
- Check calibration of pressure altitude reporting system
- Troubleshoot faulty system
- Check marker systems
- Compass replacement direct/indirect
- Check Satcom
- Check GPS
- Test AVM

Oxygen

- Inspect on board oxygen equipment
- Purge and recharge oxygen system
- Replace regulator
- Replace oxygen generator
- Test crew oxygen system
- Perform auto oxygen system deployment check
- Troubleshoot faulty system

Pneumatic systems

- Replace filter
- Replace compressor
- Recharge dessicator

- Adjust regulator
- Check for leaks
- Troubleshoot faulty system

Vacuum systems

- Replace vacuum pump
- Check/replace filters
- Adjust regulator
- Troubleshoot faulty system

Water/Waste

- Replace water pump
- Replace tap
- Replace toilet pump
- Troubleshoot faulty system

Central maintenance system

- Retrieve data from CMU
- Replace CMU
- Perform bite check
- Troubleshoot faulty system

Airborne auxiliary power

- Install APU
- Inspect hot section
- Troubleshoot faulty system

Structures

- Sheet metal repair
- Fibre glass repair
- Wooden repair
- Fabric repair
- Recover fabric control surface
- Treat corrosion
- Apply protective treatment

Doors

- Rig/adjust locking mechanism
- Adjust air stair system
- Check operation of emergency exits
- Test door warning system
- Troubleshoot faulty system

Windows

- Replace windshield
- Replace window
- Repair transparency

Wings

- Skin repair
- Recover fabric wing
- Replace tip
- Replace rib
- Check incidence/rig

Propeller

- Assemble prop after transportation
- Replace propeller
- Replace governor
- Adjust governor
- Perform static functional checks
- Check operation during ground run
- Check track
- Check setting of micro switches
- Dress out blade damage
- Dynamically balance prop
- Troubleshoot faulty system

Main rotors

- Install rotor assembly
- Replace blades
- Replace damper assembly
- Check track
- Check static balance
- Check dynamic balance
- Troubleshoot

Rotor drive

- Replace mast
- Replace drive coupling
- Replace clutch/freewheel unit
- Replace drive belt
- Install main gearbox
- Overhaul main gearbox
- Check gearbox chip detectors

Tail rotors

- Install rotor assembly
- Replace blades
- Troubleshoot

Tail rotor drive

- Replace bevel gearbox
- Replace universal joints
- Overhaul bevel gearbox
- Install drive assembly
- Check chip detectors

Rotorcraft flight controls

- Install swash plate
- Install mixing box
- Adjust pitch links
- Rig collective system
- Rig cyclic system
- Rig anti-torque system
- Check controls for assembly and locking
- Check controls for operation and sense
- Troubleshoot faulty system

Power plant

- Build up ECU

- Replace engine
- Repair cooling baffles
- Repair cowling
- Adjust cowl flaps
- Repair faulty wiring
- Troubleshoot

Piston engines

- Remove/install reduction gear
- Check crankshaft run-out
- Check tappet clearance
- Check compression
- Extract broken stud
- Install helicoil
- Perform ground run
- Establish/check reference RPM
- Troubleshoot

Turbine engines

- Replace module
- Hot section inspection
- Engine ground run
- Establish reference power
- Trend monitoring/gas path analysis
- Troubleshoot

Fuel and control, piston

- Replace engine driven pump
- Adjust AMC
- Adjust ABC
- Install carburettor/injector
- Clean injector nozzles
- Replace primer line
- Check carburettor float setting
- Troubleshoot faulty system

Fuel and control, turbine

- Replace FCU
- Replace engine driven pump
- Clean/test fuel nozzles
- Clean/replace filters
- Adjust FCU
- Troubleshoot faulty system

Ignition systems, piston

- Change magneto
- Change ignition vibrator
- Change plugs
- Test plugs
- Check H.T. leads
- Install new leads
- Check timing
- Check system bonding
- Troubleshoot faulty system

Ignition systems, turbine

- Check glow plug/ignitors
- Check H.T. leads
- Check ignition unit
- Replace ignition unit
- Troubleshoot faulty system

Engine controls

- Rig thrust lever
- Rig RPM control
- Rig mixture HP cock lever
- Rig power lever
- Check control sync (multi-eng)
- Check controls for correct assembly and locking
- Check controls for range and sense of operation
- Adjust pedestal micro-switches
- Troubleshoot faulty system

Engine indicating

- Replace engine instrument(s)
- Replace oil temperature bulb
- Replace thermocouples
- Check calibration
- Troubleshoot faulty system

Exhaust, piston

- Replace exhaust gasket
- Inspect welded repair
- Pressure check cabin heater muff
- Troubleshoot faulty system

Exhaust, turbine

- Change jet pipe
- Change shroud assembly
- Install trimmers

Oil

- Change oil
- Check filter(s)
- Adjust pressure relief valve
- Replace oil tank
- Replace oil pump
- Replace oil cooler
- Replace firewall shut off valve
- Perform oil dilution
- Troubleshoot faulty system

Starting

- Replace starter
- Replace start relay
- Replace start control valve
- Check cranking speed
- Troubleshoot faulty system

Turbines, piston engines

- Replace PRT
- Replace turbo-blower
- Replace heat shields
- Replace waste gate
- Adjust density controller

Engine water injection

- Replace water/methanol pump
- Flow check water/methanol system
- Adjust water/methanol control unit
- Check fluid for quality
- Troubleshoot faulty system

Accessory gear boxes

- Replace gearbox
- Replace drive shaft
- Check chip detector