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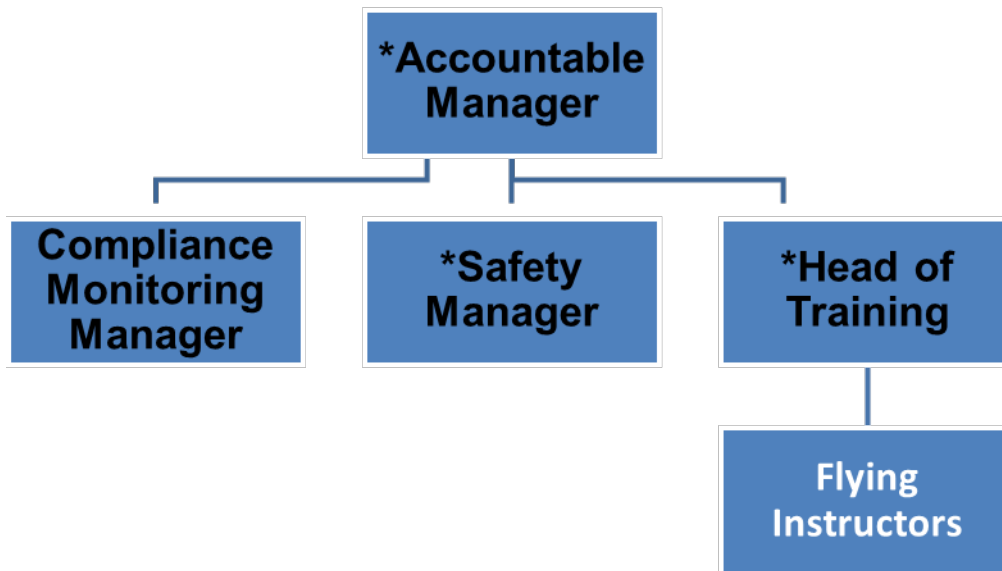
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PART 2 – OPERATIONS

1 General

1.2 ATO Structure



Note: * Roles may be combined

1.3 Responsibilities

1.3.1 Accountable Manager

The Accountable Manager is responsible for:

- Establishing and maintaining an effective management system
- Ensuring that the organisation has sufficient qualified personnel for the planned tasks and activities
- Promoting the highest degree of safety awareness throughout the organisation
- Ensuring that all activities can be financed

1.3.2 Head of Training (HT)

The HT is responsible to the Accountable Manager for:

- Ensuring that the training provided is in compliance with Part-FCL.
- Ensuring the satisfactory integration of flight training with theoretical knowledge training.
- Supervising the work of instructors.
- Monitoring the progress of individual students.
- Fostering the highest degree of safety awareness throughout the organisation.
- Liaison with the CAA regarding flight and theoretical knowledge training.

1.3.3 Safety Manager

The Safety Manager is responsible to the Accountable Manager for:

- Acting as the focal point for safety issues.
- The development, administration and maintenance of an effective safety management system
- Facilitating hazard identification, risk analysis and management
- Monitoring the implementation of actions taken to mitigate risk
- Providing periodic reports to the Accountable Manager on safety performance
- Ensuring the maintenance of safety management documentation
- Ensuring that safety management training is available and that it meets acceptable standards
- Providing advice on safety matters
- Ensuring the initiation and follow-up of internal occurrence/accident investigations

1.4 Student Discipline

Each student has the responsibility to be fully acquainted and to comply with the provisions of the Operations and Training Manuals.

If a student displays an irresponsible attitude or demonstrates a clear and distinct lack of aptitude or any other behaviour not consistent with the qualities required of a pilot, suspension from training may be considered.

In particular, termination of training is likely in the event of:

- A deliberate and unjustifiable breach of Regulation 216/2008 or its implementing rules.
- Repeated failure to comply with the provisions of the Operations and Training Manuals.
- Any behaviour or attitude that endangers flight safety
- Where the student has not made satisfactory progress

The Head of Training will decide on one of the following courses of action:

- The issue of a formal verbal warning (A further disciplinary verbal warning will result in the termination of training)
- Formally advise student of concerns and possible termination
- Immediate termination of training

1.4.2 Alcohol

No pilot shall fly in a Highland Aviation aircraft if he/she has consumed any alcohol within eight hours of take-off.

1.4.3 Drugs

Recreational drug use is not compatible with aviation safety and any student found to be indulging in such drug use is liable to immediate suspension from training.

No pilot is to fly a Highland Aviation aircraft if he has taken any medication, whether prescribed or not, unless approval has been given by an Aero-Medical Examiner (AME).

1.4.4 Reporting and Documentation

Details of a student's suspension shall be recorded in the student training file. The student must be advised in writing of any intention to suspend or terminate his training.

1.5 Approval and Authorisation of flights

In accordance with FCL.020, a student pilot shall not fly solo unless authorised to do so and supervised by a flight instructor.

All flights in a Highland Aviation aircraft are to be authorised in the computer based technical log and are to include full details of the intended flight within the limits of the authorisation.

Students on solo cross-country flights are to carry with them copies of their solo briefing sheet / solo flight information card.

Powers of authorisation for flights in Highland Aviation aircraft are delegated to flight instructors as follows:

Appointment	Authorising Powers
Head of Training	All flights
Flight Instructors (Unrestricted)	All training flights and student solo flights including land-away flights to airfields approved by the Company
Flight Instructors (Restricted)	As for unrestricted flight instructors but excluding first solo flight by day and night, and first solo cross country by day and by night.

1.5.2 Deviating from an Authorisation

The nature and limitations of the Flight Authorisation must be adhered to during the subsequent flight, except in case of emergency, or other extenuating circumstances.

In such circumstances the pilot shall, as soon as possible after the flight has ended, inform the instructor who authorised the flight of the details of the subsequent excursion from his authorisation.

1.6 Preparation of Flying Programme

The flying programme should be prepared on a weekly and daily basis by operations staff in liaison with the Head of Training.

The Head of Training should allocate students to instructors such that an equitable workload is maintained, whilst taking account of any special requirements of students.

Restricted instructors should be supervised by a named unrestricted instructor who should remain on the airfield at all times whilst supervising.

Students may book lessons in advance and non-student pilots may book aircraft for hire.

Pilots may book as many lessons in advance as required although no more than three lessons per day may be booked unless authorised by operations staff.

If unforeseen circumstances lead to an aircraft not being available for a booking, flights will be given the following priority:

- Examinations
- Dual instruction
- Student solo
- Solo hire
- Trial lessons

1.7 Nomination of Pilot-in-Command of Aircraft

On dual instructional flights the instructor will always be nominated as pilot in command.

When two or more non-student pilots hire a Highland Aviation aircraft, one must be nominated as being pilot in command (PIC). The PIC should complete the technical log, before and after the flight.

1.8 Responsibilities of Pilot in Command

The pilot in command must take all reasonable steps to

- maintain familiarity with relevant national and international aviation legislation and agreed aviation practices and procedures;
- Maintain familiarity with such provisions of Highland Aviation Operations Manual as are necessary to fulfil his function.

1.8.1 Specific Responsibilities

The pilot in command shall:

- (a) be responsible for the safe operation of the aircraft and the safety of its occupants and cargo during flight;
- (b) have authority to give all commands deemed necessary for the purpose of securing the safety of the aircraft and of persons or property carried therein, and all persons carried in the aircraft shall obey such commands;
- (c) have authority to disembark any person, or any part of the cargo, which may represent a potential hazard to the safety of the aircraft or its occupants;
- (d) not allow a person to be carried in the aircraft who appears to be under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered;
- (e) ensure that all passengers are fully briefed on:
 - use of the seat belt or harness;
 - the location and operation of emergency exits;
 - the method of locating and jettisoning windows;
 - the method of opening and emergency jettisoning of cabin doors;
 - the method of deploying life rafts and their subsequent operation (as appropriate);
 - the method and use of life jackets (as appropriate)
 - deployment and use of the radio beacon (as applicable);
 - other type specific safety features;
 - the need to read the passenger briefing card;
 - The prohibited use of portable electronic equipment such as mobile phones, laptop PCs etc.
- (f) Ensure that all operational procedures and checklists are complied with, in accordance with the Operations Manual;
- (g) Ensure that the weather forecast and reports for the proposed operating area and flight duration indicate that the flight may be conducted without infringing Highland Aviation operation minima;
- (h) Decide whether or not to accept an aircraft with unserviceability in accordance with the list of allowable deficiencies.
- (i) Take all reasonable steps to ensure that the aircraft, and any required equipment is serviceable;
- (j) Ensure that aircraft refuelling is supervised with particular attention being paid to:
 - the correct grade and amount of fuel;
 - fuel water checks;
 - fire safety precautions;
 - checking filler caps for security and correct replacement after refuelling;
- (k) Take all reasonable steps to ensure that the aircraft weight and balance is within the calculated limits for the operating conditions;

- (l) Confirm that the aircraft's performance will enable it to complete safely the proposed flight;
- (m) Not permit any pilot to perform any activity during take-off, initial climb, final approach and landing except those duties required for the safe operation of the aircraft;
- (n) take all responsible steps to ensure that before take-off and before landing the flight crew are properly secured in their allocated seats;
- (o) take all reasonable steps to ensure that whenever the aircraft is taxiing, taking off or landing, or whenever he considers it advisable (e.g. in turbulent conditions), all passengers are properly secured in their seats, and all cabin baggage is stowed in the approved stowage;
- (p) Ensure that the pre-flight inspection has been carried out.

1.8.2 Deviation from procedures in Emergencies

The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he considers necessary under the circumstances. In such cases he may deviate from rules, operational procedures, and methods in the interest of safety.

1.8.3 Responsibilities In Respect of Third Party Maintenance

(Defects away from Base)

In the event that third party maintenance of Highland Aviation aircraft is required away from base, the PIC is first to contact operations staff for authorisation. Any costs incurred for maintenance that has not been properly authorised will be wholly the responsibility of the PIC.

The PIC must ensure that, in the event of third party maintenance being required while away from base, the procedures referred to in the Technical Log are complied with.

1.9 Carriage of passengers

Subject to the approval of the Head of Training and the privileges of his licence, a person may fly as PIC of a Highland Aviation aircraft carrying passengers provided that the following conditions are complied with:

- (a) No pilot shall act as pilot-in-command of an aircraft carrying passengers unless within the preceding 90 days 3 circuits have been carried out, each to include take-offs and landings, and the pilot has been the sole manipulator of the controls in an aircraft of the same type to be flown.
- (b) Passengers may not be carried on student solo flights
- (c) Passengers may not be carried on dual instructional flights with the following exceptions:
 - Another student on the same course of training may be carried if there is a training benefit to be gained.
 - CAA inspectors may be carried on any dual instructional flight.
 - Passengers may be carried on trial lessons provided that they have a clear and direct interest in the flight (e.g. parents, partner, etc.) and no remuneration of any kind is given in respect of their carriage.

1.10 Aircraft documentation

1.10.1 Technical Log

Highland Aviation utilises an electronic journey log with entries being completed using a personal identification number. It is the responsibility of all pilots to check the aircraft technical log prior to engine start in order to establish that the aircraft is serviceable for the proposed flight.

The Daily 'A' Check may be conducted only by a licensed pilot or engineer. The person conducting the check is to certify its completion the use of their PIN in the electronic techlog.

The completion of the check A and entering the PIN is certifying that he is satisfied with the pre-flight inspection and fuel/oil states for the intended flight.

On completion of the flight, the PIC is responsible for entering the flying time, engine starts and any un-serviceability as soon as practicable after landing.

Flight time is defined in accordance with FCL.010

Any defect recorded in the technical log shall be cleared or deferred by a licensed engineer, or other authorised person, prior to the next flight.

Care must be taken at all times to ensure that the technical log is completed accurately.

1.10.2 Documents to be carried in Flight

The following documents are to be carried on each flight as originals or copies unless otherwise specified:

- i. Pilots Operating Handbook or Flight Manual
- ii. Certificate of Airworthiness (original)
- iii. Airworthiness Review Certificate
- iv. Certificate of Registration (original)
- v. Noise Certificate, if applicable
- vi. List of specific approvals, if applicable
- vii. Aircraft Radio Licence, if applicable
- viii. Certificate of third party liability insurance
- ix. Aircraft Technical Log
- x. Details of the filed ATS flight plan
- xi. Current and suitable aeronautical charts for the route of the proposed flight
- xii. The MEL (when applicable)

In the case of flights intended to take off and land at the same aerodrome and remaining within UK airspace, items iv to ix above may be retained at the aerodrome.

1.11 Retention of Documents

All documents will be retained by the CAMO UK.MG.0653 in accordance with the requirements of EASA Part M. This normally stipulates till 3 years after the aircraft has been permanently withdrawn from service or transferred to new CAMO.

1.12 Flight Crew Qualification Records

The Head of Training is responsible for maintaining an up-to-date record of the validity of staff and student licences, ratings and certificates. The Head of Training is to ensure that students and pilots are not permitted to fly if any required qualification is not valid.

1.12.1 Currency of Licences and Ratings

All pilots are to be in possession of a valid pilot licence and medical certificate before acting as pilot in command of Highland Aviation aircraft. Student pilots shall hold a valid medical certificate before being approved to fly solo. In order to be valid:

- The licence and medical certificate must be signed by the holder.
- The medical certificate expiry date must not have been exceeded.
- The licence must contain a valid Certificate of Revalidation for the aircraft type or class to be flown.
- The licence must contain a valid Language Proficiency Rating.
- For flight under IFR, the licence must contain a valid instrument rating or IMC Rating.
- If the flight involves flight at night, the licence must contain a night rating or a night qualification (unless the pilot is undergoing training for a night qualification).

A pilot who holds a licence issued by another ICAO State shall ensure that the licence is valid in all respects demanded by that State. This includes a medical certificate valid in the state of licence issue.

1.13 Revalidation

It is the responsibility of each instructor to ensure that all licences, ratings and certificates necessary for the conduct of their duties remain valid at all times.

1.14 Flight Duty Period and Flight Time Limitations (Flight Instructors)

Flight Duty Period

- (a) Maximum daily flight duty is 12 hours.
- (b) Maximum weekly flight duty is 55 hours
- (c) Maximum monthly flight duty is 190 hours

Flight Time Limitations

- (a) Maximum daily flying hours/instructional hours is 8.
- (b) Maximum monthly flying hours/instructional hours is 100.
- (c) Maximum annual flying hours/instructional hours 1000.

Flight Time Limitations (Students)

- (a) Maximum daily flying hours is 4.
- (b) Maximum weekly flying hours is 16.
- (c) Maximum monthly flying hours is 50.

Rest Periods (Flight Instructors)

- (a) Minimum rest period between consecutive duty periods is 12 hours
- (b) Minimum rest period is one day per week and six days per month (with at least two consecutive days per fortnight).

Rest Periods (Students)

- (a) Minimum rest period between flights is one hour.

1.18 Pilots' Log Books

All pilots are to maintain their personal logbooks in accordance with the provisions of AMC1 FCL.050. In particular, pilots are to ensure that the following particulars are recorded in their current log book:

- The name and address of the holder.
- Particulars of the holders licence (if any) to act as a member of the flight crew of an aircraft.

On completion of a course of training, the Head of Training is to inspect each trainee's logbook and certify that it contains an accurate record of the flights carried out

1.19 Flight Planning (General)

Prior to each flight, the pilot-in-command is responsible for the proper planning of the flight. In particular, the PIC is to take into account:

- Current meteorological reports and forecasts
- Weather minima
- NOTAMs
- Aerodrome information
- Current charts and amendments
- Aircraft mass and balance

1.20 Safety Responsibilities

The Safety Manager is responsible for monitoring the standards of flight safety within Highland Aviation, and for ensuring that all information affecting flight safety is disseminated immediately to all flying personnel.

Notwithstanding the above, all personnel have a personal responsibility towards flight safety. Anyone who discovers a factor affecting flight safety, or who wishes or discuss any matter affecting safety, should contact the Safety Manager.

1.20.2 Safety Equipment

All pilots are to ensure that they are familiar with the use of the fire extinguishers fitted to Highland Aviation aircraft.

Prior to each flight pilots are to ensure that the fire extinguisher and first aid kit have been inspected within the preceding 12 months.

1.20.3 Radio Listening Watch

Pilots are to ensure that they remain in two-way communication with a suitable ATC unit or if this is not possible, a listening watch is maintained on a suitable radio frequency throughout the flight. In normal circumstances, pilots are to be in receipt of at least a Basic Service at all times.

1.20.4 Accidents and Incidents

Any pilot involved in an accident or incident in a Highland Aviation aircraft is to complete an internal Accident/Incident Report form COM 002. Once completed, the report is to be passed to the Safety Manager.

The Safety Manager is to investigate any incident or occurrence involving Highland Aviation aircraft or any other operational matter. This in no way absolves Highland Aviation or the aircraft PIC from their duty, under the Air Navigation Order, to report accidents or incidents.

The object of an internal investigation of an accident or incident is as follows.

- To find out what happened.
- To find out why it happened.
- To recommend measures to prevent it happening again.

It is not the purpose of an investigation to find a scapegoat or to allocate blame.

1.20.5 Definition of an accident

The following is the ICAO definition of 'accident' and also the UK definition of 'reportable accident'.

“An occurrence associated with the operation of an aircraft that takes place between the time when any person boards the aircraft with the intention of flight and such time as all persons have disembarked there from, in which:

Any person suffers death or serious injury while in or upon the aircraft or by direct contact with any part of the aircraft (including any part which has become detached from the aircraft) or by direct exposure to jet blast, except when the death or serious injury is from natural causes, is self-inflicted or is inflicted by other persons or when the death or serious injury is suffered by a stowaway hiding outside the areas normally available in flight to the passengers and members of the crew of the aircraft, or

The aircraft incurs damage or structural failure, other than:

Engine failure or damage, when the damage is limited to the engine, its cowling or accessories;

Damage limited to propellers, wing tips, antennae, tyres, brakes, fairings, small dents or punctured holes in the aircraft skin, which adversely affects its structural strength, performance or flight characteristics and which would normally require major repair or replacement of the affected component, or The aircraft is missing or is completely inaccessible or

Significant damage is caused to property of the Company or any third party”.

1.20.6 Definition of a serious injury

Serious injury means an injury that is sustained by a person in a reportable accident and which:

- Requires his stay in hospital for more than 48 hours commencing within seven days from the date on which the injury was received.
- Results in a fracture of any bone (except fracture of fingers/toes/nose).
- Involves lacerations that cause nerve, muscle or tendon damage or severe haemorrhage or involves injury to any internal organ.
- Involves second or third degree burns affecting more than five per cent of the body surface.
- Involves verified exposure to infectious substances or injurious radiation.

1.20.7 Reporting procedures

Following an accident, it is the responsibility of the pilot concerned to ensure that the appropriate reporting procedures are followed.

The following sequence must be observed.

- Inform Highland Aviation immediately and by the quickest means possible - the person receiving the call will inform the Head of Training.

Inform the competent authority as soon as possible - in the UK this is the Chief Inspector, Air Accident Investigation and the Department of Transport.

Inform the local police as soon as possible - see Civil Aviation (Investigation of Accidents) Regulations 1996.

The accident report form should be completed as soon as possible, and submitted to the responsible authority (with a copy to the HT) within 72 hours. This form will be supplied by Highland Aviation.

For further information, see AIC P 55/2009 'Aircraft Accidents and Serious Incidents - Duty to Report'

1.20.8 Incident reporting

An 'incident' is an occurrence that has jeopardised the safety of passengers, crew or aircraft, but which has terminated without serious injury or damage,

Was caused by damage to, or failure of, any major component not resulting in serious injury or damage.

Following an incident, it is the responsibility of the pilot concerned to ensure that the appropriate reporting procedures are followed.

The following sequence must be observed.

Inform Highland Aviation immediately and by the quickest means possible – The person receiving the call will inform the Head of Training.

Complete an incident report form, and submit it to the Head of Training within 3 days - the relevant form will be supplied by Highland Aviation.

1.20.9 Occurrence reporting

An 'occurrence' is any incident that is not a notifiable accident.

A 'reportable occurrence' is:

Any defect or malfunction of any part of an aircraft or its equipment which, if not corrected, would have endangered the aircraft, its occupants or any other person,

Failure or inadequacy of facilities or services on the ground used, or in connection with, the operation of the aircraft,

Any incident arising from the loading or carriage of passengers, cargo or fuel.

The overriding criterion to determine whether an occurrence is reportable is if it has endangered or, if uncorrected would have endangered, the aircraft, occupants or other persons.

All pilots or any persons must report such occurrences on the CAA Occurrence Report form SRG 1601 and submit it to the CAA with a copy to the Head of Training.

For further information, see CAP 382 'MOR Scheme'.

1.20.10 AirProx

An airprox report shall be made whenever a pilot or controller considers that the horizontal or vertical distance between aircraft has been such that the safety of the aircraft was, or may have been, compromised.

Pilots wishing to make an airprox report should immediately inform ATC. If this is not possible, then the report should be made as soon as possible after landing, by telephone, to any UK ATCC.

A follow-up report on Form CA 1094 should then be submitted to the UK AirProx Board within seven days.

For further information, see General Aviation Safety Sense leaflet 13A and UK AIP, ENR Section 1.14.

1.20.11 Bird strike

Any bird strikes or near miss is to be reported. Online reporting is preferred at www.caa.co.uk/birdstrikereporting Where online reporting is not possible, reports may be made using Form SRG\2004 (see Chapter 5 of CAP 772 and Article 227 of the ANO 2009).

1.20.12 Wake vortices

Any pilots experiencing wake vortex problems are to report the incident on Form SRG 1423. See AIC P3/2014 'Wake Turbulence'

1.20.13 General reporting

All accidents, occurrences and airproxes involving approved training courses, including dual sorties with instructors, are to be notified to Approvals Support, CAA Licensing and Training Standards Department.

1.20.14 Insurance and recovery charges

Solo students and private hire pilots shall be liable in the event of an accident/incident for the first £7,500 of uninsured losses. Losses may include, but are not limited to: insurance excess, aircraft recovery charges, administration costs and loss of income.

1.20.15 Deep cleaning

Should an aircraft be returned from self-hire or whilst undertaking a training or trial flight requiring interior cleaning due to human contamination Highland Aviation reserve the right to charge up to a maximum of £150 for a deep clean service.

1.20.16 Arriving late/ Returning late

If any student or pilot booked into a specific time slot arrives more than 15 minutes late for the allotted slot, they may be liable for a £25 cancellation fee if the flight needs to be cancelled in order to preserve later bookings.

Any private hire pilots that book an aircraft for a specific time and return late may incur a £25 cancellation fee if later flights have had to be cancelled due to their lateness.

2 Technical

2.21 Aircraft Descriptive Notes

Technical details of the aircraft used for training can be found in the relevant Pilots Operating Handbook or Flight Manual. The POH are controlled by the CAMO, UK.MG.0653 as part of the aircraft records. The POH are assessed and the revision status checked as part of the M.A 901 ARC process.

2.22 Aircraft Handling

2.22.1 Checklists

Aircraft are to be operated in accordance with the relevant checklist. Where any conflict is found between the checklist and the manufacturer's Pilot's Operating Handbook, the latter is to take precedence.

Any conflict between the checklist and the Pilot's Operating Handbook is to be reported to the Head of Training without delay.

All pilots are to be in possession of the appropriate checklist for the aircraft they are flying.

Pilots are to comply with the handling notes and checklist for each specific aircraft type flown.

2.22.2 Limitations

Aircraft are to be operated within the limitations laid down in the Pilot's Operating Handbook and any relevant national legislation.

Should any limitation be exceeded inadvertently, the fact is to be recorded in the technical log and the Head of Training is to be informed without delay.

If any structural or engine operating limitation is exceeded, the aircraft is to be landed as soon as is practicable and is not to be flown again except with the permission of the Head of Training.

2.22.3 Maintenance

The Aircraft used by Highland Aviation Training are managed and the maintenance is controlled by Highland Aviation Training CAMO UK.MG.0653.

2.22.4 Technical Logs

It is the responsibility of all pilots, including trainee pilots on solo training exercises, to check the aircraft technical log prior to engine start in order to establish that the aircraft is serviceable for the proposed flight. See Para 1.10.1 this section for details.

2.22.5 Deferred Defects

The PIC will report all defects to the operations staff.

Defects fall into two categories those that “seriously hazard” flight safety and those that do not “seriously hazard” flight safety. Defects which “seriously hazard” flight safety must be rectified before further flight. Only authorised certifying staff can decide what rectification action is required prior to further flight. Any defect that does not “seriously hazard” flight safety can be rectified at the next practicable opportunity.

Defects are reported using the Electronic Tech log and Form ENG 019 Deferred Defect Log. All defects recorded will be monitored by the Continuing Airworthiness manager. All faults recorded will require a Workpack reference number to clear the defect from the Electronic Tech Log and the ENG 019.

Currently defects which “seriously hazard” flight safety will be rectified by a suitably qualified engineer and the Workpack and CRS duly entered in the aircraft records.

Defects which do not “seriously hazard” flight safety will be deferred until the next maintenance check until the establishment of an MEL.

For more details see company CAME Pare 1.8 to 1.8.3

2.23 General

Pilots should be familiar with the procedures to be undertaken in the event of an emergency. The following emergency situations should be dealt with by carrying out the necessary checks and drills from memory.

- Engine fire on the ground.
- Engine fire in the air.
- Engine failure after take-off.
- Ditching.
- Radio Failure
- Forced landing with and without power.
- Crash checks.
- Brake Failure
- Tyre deflation

In case of emergency, the procedures laid down in the relevant checklist are to be followed. Where any conflict is found between the checklist and the Pilot’s Operating Handbook, the latter is to take precedence.

Any conflict between the checklist and the Pilot’s Operating Handbook is to be reported to the Head of Training without delay.

2.24 Radio and radio navigation aids

All aircraft are fitted with VHF radio and basic navigational aids. No aircraft is to fly without at least one VHF radio operational.

2.25 Allowable deficiencies

Aircraft are to meet the minimum airworthiness requirements at all times and all equipment required by European and national legislation, appropriate to the type of flight intended, is to be fitted and working.

Aircraft without an established MEL:

For dual instructional flying in aircraft that do not have a minimum equipment list established under the Air Operations Regulation, the component or system listed in column 1 of the following tables may be inoperative prior to the flight commencing, taking account of the environmental conditions indicated in columns 2 and 3, subject to the remarks in column 4.

The aircraft used by Highland Aviation training currently falls into the "Aircraft without an established MEL" category. A suitable MEL will be drafted using CAP 549 and the FAA generic SEP MMEL.

This list does not contain the obviously required for flight items such as wings flaps and rudder. It is important to remember that all equipment related to the airworthiness and the operating requirements of the aircraft not listed in the MMEL must be operative.

Irrespective of anything included in the MEL it remains the Aircraft Commanders prerogative to require that items in the MEL be made serviceable before dispatch, in his / her opinion such items are required for the safe conduct of the intended flight.

Highland Aviation MEL

Allowable Deficiencies – Single-Engine Aircraft			
(1) Deficiency	Acceptable		(4) Remarks
	(2) Day	(3) Night	
Cockpit or cabin lights	✓		
Landing light/Taxi light	✓		
Navigation (Position) lights	✓		
OAT gauge	✓	✓	Flight to remain clear of known icing conditions
Pitot heater	✓	✓	Flight to remain clear of known icing conditions
Cabin heating	✓	✓	
Airspeed indicator			
Altimeter	✓	✓	One must be serviceable. One may be unserviceable if two are fitted, subject to legal requirement for the flight
VSI	✓	✓	No solo student flights permitted
Attitude indicator	✓		Day VMC only
Turn co-ordinator	✓	✓	VMC only. No spin/stall awareness/avoidance training permitted. No solo student flights permitted
Directional gyro	✓	✓	No solo student flights permitted
VHF comms	✓	✓	Continue to destination only if no requirement for radio at destination
Intercom	✓	✓	For non-instructional flights only
Radionav aids/GPS	✓	✓	Subject to legal requirement for the flight
Transponder	✓	✓	Subject to legal requirement for the flight. No solo flights permitted
Fuel contents gauge	✓	✓	No solo student flights permitted Visual inspection must be carried out before every flight (Fuel for the planned flight with normal reserves, plus one hour contingency fuel is the minimum departure load)

Review to be completed annually

3 Route

3.1 Performance

Article 87 of the Air Navigation Order 2009 places on the pilot in command of an aircraft the responsibility to ensure that having regard to the performance of the aircraft in the conditions to be expected on the intended flight, and to any obstructions at the places of departure and intended destination and on the intended route, it is capable of safely taking off, reaching and maintaining a safe height thereafter and making a safe landing at the place of intended destination.

Prior to each flight in a Highland Aviation aircraft, pilots are to ensure that the calculated performance of the aircraft is sufficient to allow the intended flight profile to be completed.

3.1.2 Take-off

Runways 23/05 at Inverness are sufficiently long that pilots of Highland Aviation aircraft do not normally need to consider take off performance of Highland Aviation aircraft. The same is true of runways in use on the standard qualifying cross country routes. However, there are airfields that may be used that require a consideration of take-off performance. These include the smaller grass strips and recognised beach landing strips. Pilots should therefore familiarise themselves with take-off performance data as provided in the Pilots Operating Handbook (POH). In particular, for the PA38 and PA28, the graphs in section 5 of the POH can be used to estimate the take-off distance required in relation to temperature and pressure altitude.

When taking off on dry grass/sand, a safety factor of 1.2 should be applied.

When taking off on wet grass/sand, a safety factor of 1.4 should be applied.

3.1.3 Route

Pilots should be aware that the climb performance of aircraft depends on a number of factors, including temperature, pressure altitude and load. In particular, on warm days, flying over the mountains at maximum weight, the climb performance can be severely reduced. This can be quite significant when experiencing vertical air movement in mountain wave. A graph of climb performance is shown in section 5 of the POH.

The POH also details power settings for best endurance, economy and range.

3.1.4 Landing

In the same way that long runways mean that pilots do not usually give consideration to take off performance, landing distance required is often not calculated. However, the requirement to calculate the landing roll required can be important when using grass strips or recognised beach landing sites.

Section 5 of the POH for the PA28 and PA38 includes a number of graphs that can be used to calculate the landing distance required.

When landing on a wet runway, a safety factor of 1.4 should be applied.

3.2 Flight planning

3.2.1 Fuel

Prior to each flight the PIC is to ensure that sufficient fuel has been loaded to complete the intended flight profile and to allow the aircraft to land with sufficient reserve fuel to fly for one hour.

3.2.2 Oil

The oil level should be checked before every flight and if necessary, oil should be added. As a guide, the oil level of the PA38 should not be flown if the oil level is below 4.5 quarts and the PA28 should not be below 6 quarts. Oil uplifts are to be recorded in the techlog.

3.2.3 Minimum Safe Altitude

Before departing on a cross-country flight, pilots are to calculate a minimum safe altitude (MSA) for the intended route: Each leg of the cross-country flight should be flown at an altitude or level that is above the calculated MSA. However on a VFR flight, a leg or part of a leg can be flown below MSA, provided there are very good VMC conditions and a good lookout is maintained and minimum altitude rules are adhered to.

The minimum planned height for student solo VFR flights is 2000 ft. Dual navigation training flights shall not be planned below 1500 ft.

Stall training must be carried out at a height such that a recovery can be made by 3000 ft.

Bad weather circuits should not be flown at less than 500 ft.

No intentional Spinning of Highland Aviation Training Ltd aircraft should be undertaken unless fitted with a five-point harness and the spin has been approved by the head of training.

IFR flights in uncontrolled airspace should be flown at a quadrantal level above the minimum safe altitude (MSA).

Minimum safe altitude is to be calculated as follows:

Locate the highest obstruction 5nm either side of track/turning points/destination.

Round up to the nearest 100ft then add 1000ft.

Flight over water should be at an altitude such that in the event of an engine failure, the aircraft would glide to the shore. In particular, aircraft approaching Inverness airfield from the north, should be at an altitude to allow a glide to the shore to be achieved. Approaches from Munloch Bay or Fortrose should commence at not below 2000 ft., unless the cloud base does not allow this.

3.2.4 Navigation Equipment

The PIC should ensure that before departure, the aircraft's navigational equipment is checked for serviceability relevant to the lesson plan and in accordance with the MEL, that the student ensures that they carry with them the necessary equipment (stopwatch, chart, plotter etc.).

3.3 Loading

3.3.1 General

No Highland Aviation aircraft is to take-off at a mass greater than the maximum authorised Take-Off Mass (MTOM). To achieve this it may be necessary to reduce the fuel load carried (with due regard to the fuel required for the flight as detailed in the flight planning requirements at paragraph 3.2 above) or to reduce the payload. In addition, pilots are to ensure that:

- (a) The aircraft mass will be below the Maximum Landing Mass (MLM) before the first landing or touch and go.
- (b) The crew/passenger/baggage/ballast distribution results in a C of G position within the flight envelope published in the Pilot Operating Handbook/Flight Manual.
- (c) A copy of the aircraft's latest Mass and Balance Report is held in the aircraft Technical Log or the aircraft's documents folder.

3.3.2 Load Sheets

It is the responsibility of the PIC to ensure that an aircraft is loaded in such a way as to meet the limitations related to all up weight and centre of gravity detailed in the appropriate flight manual or pilot's operating handbook. If any doubt exists as to the proper distribution of an aircraft's load, a load sheet is to be prepared, in accordance with the instructions in the relevant Pilot's Operating Handbook/ Flight Manual, showing both longitudinal and lateral centre of gravity.

3.4 Weather Minima

Holders of PPL/NPPL/LAPL licences:

The cloud base must be sufficiently high to allow all minimum height rules to be obeyed (500 ft rule and 1000 ft. rule) with a minimum of 5km horizontal visibility. Surface wind speeds at any aerodrome of destination or diversion must not be more than 20 knots steady or gusting 25 knots. Crosswinds must be less than the demonstrated crosswind limit for the aircraft.

Holders of PPL licences with IMC rating:

For departure, the runway visibility must be greater than 1800 m and the cloud base must be greater than 1000 ft. above the airfield. Wind speed limits as (1) above.

IMC rated pilots are to observe the following minima procedural approaches:

Precision approach – 500 ft.

Non-precision approach – 600 ft.

Any approach system minimum greater than these heights should be used.

Holders of CPL/ATPL licences:

Holders of these professional licences shall operate within the privileges of that licence.

Students at all stages of their training:

For all flights with an instructor, a maximum steady wind of 25 knots and/or maximum gusts of 30 knots and a steady crosswind component of 15 knots and not more than the demonstrated crosswind limit for the aircraft. No weather warnings in place.

For solo circuit flying, a minimum cloud base of 1200 ft., a minimum visibility of

7 km, a maximum steady wind of 15 knots with no gusts and a steady crosswind of 10 knots maximum. No weather warnings in place.

For solo flights outside the circuit, the cloud base must be not less than 1500 ft and for solo cross-country flights not less than 2500 ft. along the entire route and a minimum visibility of 10 km. The steady wind at the altitude flown should be no more than 30 knots and no moderate/severe turbulence forecast. No weather warnings in place.

3.5 Training Routes/Areas

Inverness airport is surrounded by a large area of Class G airspace, making it an ideal place for flying training to take place. This training environment is enhanced by a significant volume of commercial traffic and pilots need to be aware that large passenger aircraft can be departing and arriving close to the local training area (LTA).

The LTA is shown in Appendix 2. General handling training should take place in this area. Navigation training and initial flight experience may take place out with the LTA.

Instructors and solo student pilots should ensure that they remain well away from the extended centre line of runway 05/23.

From time to time, air traffic may request an aircraft in the LTA to remain below a certain altitude. This is to allow an inbound aircraft to descend to 1000 ft. above this level so that an expeditious approach and landing can be carried out. Instructors and students should normally agree to this limit unless an operational or weather reason does not allow it.

3.6.1 Aerodrome Opening Hours

The hours of opening of HIAL airports are published on the HIAL website. The current version is available as appendix 5. Pilots without a night rating may fly solo from 30 minutes before sunrise until 30 minutes after sunset. All pilots should land 30 minutes prior to the airport closure. Highland Aviation does not have out of hour's indemnity for any HIAL airports so it is not possible to arrive or depart outside of airport open times. Inverness airport chart is shown in Appendix 4.

3.6.2 Taxiing Procedures

Pilots should copy the latest ATIS before calling for taxi. The ATIS is broadcast on 109.2 MHz or can be heard via recorded message on tel: 01667 464255. The initial radio call should include the a/c callsign, type, the position of the aircraft (north apron), the version of the ATIS received (A, B, C.....), the QNH copied and the request for taxi.

The normal taxi routes are to Foxtrot via the echo taxiway and runway 11, or to A1 via the echo and alpha taxiway. Air traffic may alter this to suit traffic movements.

Aircraft should be taxed at a speed equivalent to a fast walk when in the vicinity of other aircraft or vehicles. On an open taxiway, this may be increased to a jogging pace. Fast taxiing is prohibited. Special care needs to be taken when taxiing close to vehicles and obstructions. If pilots are in any doubt about avoiding an obstacle, the engine should be shut down and assistance sought. Do not taxi over areas of loose chippings.

Power checks and pre-take off checks are normally carried out at Alpha 1 or Foxtrot.

3.6.3 Circuit procedures

Circuits should be flown on QFE at 1000 ft. Although the altitude of the airfield is such that there is often little or even no difference between QFE and QNH, it is good practice to use QFE as this is good preparation for flying the circuit at other airfields.

Standard R/T calls should be used. In particular, the radio call on the downwind should be 'GABCD, downwind, left/right hand, runway 23/05, for touch-and-go/landing.' Giving this amount of information allows inbound traffic to be aware of the position of circuit traffic and also allows air traffic to plan ahead.

Aircraft in the circuit should avoid flying over the terminal buildings and the main built up area of Ardersier. Fort George danger area is often active up to 2100 ft. and must be avoided. Pilots should be particularly aware of the possibility of drifting into this danger area during orbits at the end of downwind leg for right hand circuits on runway 23. The circuit patterns are shown in appendix 1.

Bad weather circuits should be flown at a height of 500 ft. Permission should be obtained from air traffic before flying a bad weather circuit.

Practice engine failures after take-off may be carried out on runways 23 and 05 after receiving permission from air traffic. EFATOs should only be carried out with an instructor on-board the aircraft. Air traffic should be asked for permission to carry out a 'fan stop' and pilots should report when climbing away.

Authorisation for a first solo may only be given by a non-restricted-instructor who should remain in a position to observe the flight and listen to the ATC radio. The first solo should be a single circuit.

3.6.4 VFR Circuit Departure

Air traffic will give instructions to aircraft departing the circuit. Occasionally aircraft will be asked to route to Munloch Bay to the northwest, or Croy to the southwest. Note that Croy is not on a CAA map. It is the village about 1.5 miles to the southwest of the airfield.

Standard R/T calls should be used when departing the circuit.

3.6.5 Noise Abatement

There are no particular noise abatement procedures in place at Inverness Airport. However, consideration should be given to all local residents and flying over built up areas should be avoided. In particular, repeated PFLs should be avoided in the same area.

3.6.6 Local Flying Area

The local training area is shown in appendix 2. Aircraft carrying out general handling exercises should remain well clear of the extended centre lines of runways 23 and 05.

Fast military jet aircraft are common around Inverness. Although these aircraft usually call on Inverness radar/approach frequency (122.60) to state their intentions, they do not always do this. Pilots should therefore keep a good lookout for fast jet traffic. Common routes include passing below 500 ft along the Cromarty Firth and transiting East – West about 10 miles south of the airfield.

On start-up, pilots should obtain the latest ATIS report on the VOR frequency. On calling for taxi, the initial R/T call should include the version of the ATIS received and the stated QNH.

Pilots should obtain a minimum of a basic service and remain in two-way communication with tower, approach or radar ATC unit. Pilots flying at some distance from Inverness and unable to receive a basic service from Scottish Information, may remain on a listening watch with approach/radar. Pilots training in IMC conditions should request a traffic service or higher when radar is available. When returning to the airfield, pilots should state their position and intentions at an early stage so that radar/approach can plan for an expeditious arrival.

Life jackets shall be worn when flying over open water. This requirement is relaxed for aircraft flying over the Moray, Beaully, Cromarty and Dornoch Firths, provided the aircraft is at sufficient height so that the aircraft can glide clear.

3.6.7 Standard Cross-country Routes

See Appendix 3 for chart extracts.

The suggested sequence of navigation exercises for PPL/LAPL students is as follows.

- 1 Munlochry – Dingwall – Cromarty (Dual)
- 2 Munlochry – Bonar Bridge – Dores (Dual)
- 3 Nairn – Dallochry – Braemar (with a diversion) (Dual)
- 4 Munlochry – Dingwall – Cromarty (Solo)
- 5 Munlochry – Bonar Bridge – Dores (Solo)
- 6 Inverness – Wick – Kirkwall – Inverness (Dual PPL)
Inverness – Wick – Inverness (Dual LAPL)
- 7 Inverness – Wick – Kirkwall – Inverness (Solo PPL)
Inverness – Wick – Inverness (Solo LAPL)

3.6.8 Prohibited and Danger Areas

- The Highland Restricted Area (R610) is activated by NOTAM. You must specifically check NOTAMs for these areas during flight planning.
- Fort George Danger Area (D702) is active most of the time up to 2100 ft.
- Tain Range (D703) is also active much of the time, particularly 9am-5pm Monday to Friday. A Danger Area crossing service is available on a frequency of 122.75 MHz. We recommend you to contact the range controller by telephone before your flight on 01862 894164.

3.6.9 Circuit Re-join Procedures

The published reporting points may be used when returning to the airfield from cross-country flights or local flights. However, other local features may be used. In particular, Cromarty, Rosemarkie mast, Mount Eagle mast and Munloch Bay can be used as reporting points.

ATC will specify the type of re-join required and pilots should plan for this unless they request and obtain permission for an alternative re-join. In general, overhead joins are not carried out although they may be requested and air traffic may approve them if traffic permits.

Aircraft returning from flights away from the local area should call ATC at a minimum distance of 15 miles from Inverness. An exception to this is arrivals from the east, when pilots are in communication with Lossiemouth LARS, who will co-ordinate the hand-over. The standard R/T call when requesting a re-join for landing or touch-and-go is GABCD at (position), request re-join. This assumes the aircraft is booked out as a local flight.

3.6.10 After Flight Procedures

After landing checks should not be carried out on an active runway. Solo students should stop the aircraft after vacating the runway before carrying out the after-landing checks. When an instructor is onboard, the checks can be carried out whilst taxiing slowly along the taxiway.

Aircraft should be parked on the north apron. The normal parking position for Highland Aviation aircraft is at the Northern end of the North apron from the Highland Aviation building and around the old Helipad area. Airfield operations occasionally marshal aircraft into a selected parking space. However, school aircraft are mostly expected to self-park.

Fuelling in Inverness is carried out by trained Highland Aviation staff only, from the Company's AVGAS bowser. Pilots are expected to calculate correctly the amount of fuel needed for their flight and should be able to demonstrate if asked for their fuel calculations. All staff are required to make a logic check of fuel requested by pilots, and fuel tanks should not automatically be filled full. Pilots are responsible for, and at liberty to take as much or as little fuel as required for their flight but should expect to be quizzed about their requests.

Aircraft should always be chocked with the parking brake off and should be positioned so that the wings are over the concreted area. Tie downs and control locks should be used in windy/gusty conditions. If severe weather is forecast, aircraft should be moved to the hanger in good time.

4 Personnel Training

Responsibilities

The Head of Training is responsible for the supervision of all flight instructors, the standardisation of all flight instruction and the maintenance of appropriate records.

4.2 Initial Training

Instructors should undertake an induction course before carrying out any instructional flights. Details of the topics to be included in the induction course are listed and described in the document “Induction Course for New Flying Instructors”. The topics are:

- Organisation of Highland Aviation
- Introduction to the aircraft in use
- Manuals and Documentation
- Maintenance Procedures
- Theoretical Knowledge Training Programme
- Flight Training Programme
- Emergency and Safety Training
- Local Area Familiarisation
- Logging flights
- Recording student notes
- AVGAS Bowser Training

4.3 Refresher Training

The Head of Training should carry out annual reviews with instructors, highlighting positive aspects of the previous year’s work and agreeing desirable training. Refresher training in any of the topics listed above may be agreed as well as training to develop any other agreed needs.

4.4 Standardisation Training

Regular instructors’ meetings will address issues related to flight instruction. The decisions made at these meetings will be recorded and made available to all instructors. Over a period of time, all parts of the training syllabus will be reviewed with the aim of developing a standardised approach.

4.5 Proficiency Checks

New instructors undertake a proficiency check with the Head of Training before being allocated instructional flights. New instructors should be able to demonstrate accurate flying with sufficient capacity to engage in conversation during appropriate stages of the flight. Situational awareness should be excellent and the instructor should demonstrate a quiet confidence during the flight.

Instructors should take every opportunity to fly with each other and with the Head of Training. Suitable flights include flights in a 4 seat aircraft with a spare back seat and positioning flights in a 2 seat aircraft. These flights should be used to discuss approaches to instruction and in the case of flights with the Head of Training they have the function of monitoring performance. Instructors should carry out at least one of these flights every 12 months.