OPERATIONS MANUAL

GLOBAL AIR SERVICES

◇

GR-FTO-002

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Approved by:

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HCAA

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Quality Manager

Record of revision

Rev no.	Rev. date	Ins. Date	Sign.
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A Transmittal Letter, containing detailed information regarding the contents of the revision, will accompany all revisions. The Transmittal Letter should be signed upon receipt by the registered holder of the manual and returned to the issuer (Head of Training). This will allow the issuer to control proper updating of all controlled copies.

Distribution List

Serial No	To Whom Issued	Date
1	Hellenic CAA	February 2009
2	Accountable Manager	February 2009
3	Head of Training	February 2009
6	Chief Flight Instructor	February 2009
7	Chief Ground Instructor	February 2009
8	Operations at Megara LGMG	February 2009

An acknowledgement receipt will be sent with each amendment notice, which must be signed and returned to the Head of Training as soon as possible. The purpose of the Acknowledgement Receipt is to ensure the management of the Organization that every holder of an Operations Manual copy, has received, understood and attached the latest revisions and changes to his/her manual.

SECTION 1

GENERAL

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Definitions

Aeroplane required to be operated with a copilot
A type of aeroplane that is required to be operated with a co-pilot as specified in the flight manual or by the air operator certificate.
Airmanship.
The consistent use of good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives.
Category (of aircraft):
Categorisation of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.
Competency
A combination of skills, knowledge and attitude required to perform a task to the prescribed standard.
Competency element
An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.
Competency unit
A discrete function consisting of a number of competency elements.
Conversion (of a licence):
The issue of a JAR–FCL licence on the basis of a licence issued by a non-JAA State.
Co-pilot:
"Co-pilot" means a pilot operating other than as pilot-in-command, an aircraft for which more than one pilot is required under the list of types of aeroplanes (see Appendix 1 to JAR-FCL 1.220) or the type certification of the aircraft, or the operational regulations under which the flight is conducted, but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction for a licence or rating.
Credit
Recognition of alternative means or prior qualifications.
Cross-Country.
A flight between a point of departure and a point of arrival following a pre –planned route using standard navigation procedures.
Dual instruction time:
Flight time or instrument ground time during which a person is receiving flight instruction from a properly authorised instructor.
Error
An action or inaction by the flight crew that leads to deviations from organizational or flight intentions or expectations.
Error management
The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of errors or undesired aircraft states.
Flight Engineer:
A Flight Engineer is a person who complies with the requirements in JAR-FCL (also in Section 2).
Flight time:
The total time from the moment an aircraft first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.
Instrument time:
Instrument flight time or instrument ground time.
Instrument flight time:
Time during which a pilot is controlling an aircraft in flight solely by reference to instruments.

Instrument ground time:
Time during which a pilot is receiving instruction in simulated instrument flight in synthetic training devices (STDs).

Multi-crew co-operation:
The functioning of the flight crew as a team of co-operating members led by the pilot-in command.

Multi-pilot aeroplanes:
Aeroplanes certificated for operation with a minimum crew of at least two pilots.

Night:
The period between the end of evening civil twilight and the beginning of morning civil twilight, or such other period between sunset and sunrise as may be prescribed by the appropriate Authority.

Other training devices:
Training aids other than flight simulators, flight training devices or flight and navigation procedures trainers which provide means for training where a complete flight deck environment is not necessary.

Performance criteria
A simple, evaluative statement on the required outcome of the competency element and a description of the criteria used to judge if the required level of performance has been achieved.

Pilot-in-command under supervision
Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the Authority.

Private pilot:
A pilot who holds a licence which prohibits the piloting of aircraft in operations for which remuneration is given.

Professional pilot:
A pilot who holds a licence which permits the piloting of aircraft in operations for which remuneration is given.

Proficiency checks:
Demonstrations of skill to revalidate or renew ratings, and including such oral examination as the examiner may require.

Rating:
An entry in a licence stating special conditions, privileges or limitations pertaining to that licence.

Renewal (of e.g. a rating or approval):
The administrative action taken after a rating or approval has lapsed that renews the privileges of the rating or approval for a further specified period consequent upon the fulfilment of specified requirements.

Revalidation (of e.g. a rating or approval):
The administrative action taken within the period of validity of a rating or approval that allows the holder to continue to exercise the privileges of a rating or approval for a further specified period consequent upon the fulfilment of specified requirements.

Route sector:
A flight comprising take-off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.

Single-pilot aeroplanes:
Aeroplanes certificated for operation by one pilot.

Skill tests:
Skill tests are demonstrations of skill for licence or rating issue, including such oral examination as the examiner may require.

Solo flight time:
Flight time during which a student pilot is the sole occupant of an aircraft.

Student pilot-in-command (SPIC):
Flight time during which the flight instructor will only observe the student acting as pilot-in command

and shall not influence or control the flight of the aircraft.

Threat.

Events or errors that occur beyond the influence of the flight crew, increase operational complexity and which must be managed to maintain the margin of safety.

Threat management.

The process of detecting and responding to the threats with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors or undesired aircraft states.

Touring Motor Glider (TMG):

A motor glider having a certificate of airworthiness issued or accepted by a JAA Member State having an integrally mounted, non-retractable engine and a non-retractable propeller plus those listed in Appendix 1 to JAR/FCL 1.215. It shall be capable of taking off and climbing under its own power according to its flight manual.

Type (of aircraft):

All aircraft of the same basic design, including all modifications except those modifications which result in a change of handling, flight characteristics or flight crew complement.

Abbreviations

A Aeroplane
A/C Aircraft
AMC Acceptable Means of Compliance
AMC Aeromedical Centre
AME Authorised Medical Examiner
AMS Aeromedical Section
ATC Air Traffic Control
ATP Airline Transport Pilot
ATPL Airline Transport Pilot Licence
CFI Chief Flying Instructor
CGI Chief Ground Instructor
[CP Co-pilot]
CPL Commercial Pilot Licence
CRE Class Rating Examiner
CRI Class Rating Instructor
CQB Central Question Bank
FCL Flight Crew Licensing
FE Flight Examiner
[F/E Flight Engineer]
FI Flight Instructor
FIE Flight Instructor Examiner
FNPT Flight and Navigation Procedures Trainer
FS Flight Simulator
FTD Flight Training Device
FTO Flying Training Organisation]
H Helicopter
HT Head of Training
ICAO International Civil Aviation Organisation]
IEM Interpretative and Explanatory Material
IFR Instrument Flight Rules
IMC Instrument Meteorological Conditions
IR Instrument Rating
IRE Instrument Rating Examiner
IRI Instrument Rating Instructor
JAA Joint Aviation Authorities
JAR Joint Aviation Requirements
LOFT Line Orientated Flight Training
MCC Multi Crew Co-operation
ME Multi-engine
[MEL Minimum Equipment List]
MEP Multi-engine Piston
MET Multi-engine Turbo-prop
MPA Multi-pilot Aeroplane
MPH Multi-pilot Helicopter
nm Nautical Miles
OML Operational Multicrew Limitation
OSL Operational Safety Pilot Limitation
OTD Other Training Devices
PF Pilot Flying
PIC Pilot-In-Command
PICUS Pilot-In-Command Under Supervision
PNF Pilot Not Flying
PPL Private Pilot Licence
R/T Radiotelephony
SE Single-engine
[SEP Single Engine Piston]
SET Single-engine Turbo-prop
SFE Synthetic Flight Examiner
SFI Synthetic Flight Instructor
SPA Single-pilot Aeroplane
SPH Single-pilot Helicopter
SPIC Student Pilot-In-Command
STD Synthetic Training Devices
TMG Touring Motor Glider
TR Type Rating
TRE Type Rating Examiner
TRI Type Rating Instructor
TRTO Type Rating Training Organisation
VFR Visual Flight Rules
VMC Visual Meteorological Conditions
ZFTT Zero Flight Time Training

Training Organization Overview

Global Air Services is an approved Flying Training Organization (FTO) under JAR-FCL with identification name GR-FTO-002. Global Air Services is staffed, equipped and operated in a suitable environment offering flying, synthetic, and theoretical training for specific training programs. The management structure of Global Air Services ensures adequate supervision of all grades of staff by persons having the experience and qualities necessary to ensure the highest standards of quality. Details of the management structure, individual responsibilities, and authorities are available further on. Global Air Services operates in accordance to the Organization Manuals approved by the HCAA. These are: the Operations Manual, Quality Manual, Training Manual Part 1 (The Training Plan), Training Manual Part 2 (Briefing and Air Exercises), Training Manual Part 3 (Synthetic Flight Training) and Training Manual Part 4 (Theoretical Knowledge Instruction).

Training Courses Overview

Global Air Services is approved to offer the following Pilot Training Courses:

- ATPL(A) Integrated Courses
- ATPL(A) Modular Residential Courses
- ATPL(A) Modular Distance Learning Courses
- CPL(A)/IR Integrated Courses
- CPL(A) Integrated Courses
- CPL(A Modular Residential Courses
- CPL(A) Modular Distance Learning Courses
- PPL(A) Courses
- Instrument Rating IR(A) Modular Residential Courses
- Instrument Rating IR(A) Modular Distance Learning Courses
- Multi Engine Piston Class Rating Courses
- Single Engine Piston Class Rating Courses
- Flight Instructor Initial FI(A) Rating Courses
- Instrument Flight Instructor Initial IRI(A) Rating Courses
- Multi Engine Piston Class Flight Instructor Initial CRI(A) Rating Courses
- Refresher IR(A) Courses
- Refresher Multi Engine Piston Class Rating Courses
- Refresher FI(A) Courses
- Refresher IRI(A) Courses
- Refresher CRI(A) Courses
- Multi Crew Cooperation (MCC) Rating Courses
- Aviation English Examination Centre (TEA)

Details on the above Pilot Training Courses are available in Global Air Services Training Manual.

Post Holders Overview, Qualifications & Responsibilities

Global Air Services employs sufficient in number, experienced and qualified managers according to APPENDIX 1 JAR-FCL 1.055. In addition to that it employs deputies in order to ensure training offered to students is always monitored, evaluated and undisrupted.

Board of Global Air Services

The body of appointed managers who jointly oversee the training activities of Global Air Services. The Board consists of the Accountable Manager, the Head of Training, the Chief Flight Instructor and the Chief Ground Instructor. Although, this body is not decribed nor enforced in JAR-FCL, Global Air Services created it in order to have a collective oversight of all operations. This Board's main function is to ensure that all Post Holders are properly supervised and monitored and their duties are performed according to the required standards. The Board's activities are mainly advisory and are determined and delegated by the shareholders of Global Air Services SA. Global Air Services SA is the name of the legal entity, under Greek Law, operating Global Air Services.

Accountable Manager

The nominated person acceptable to the Hellenic Civil Aviation Authority, who ensures that sufficient funding is available to conduct training to the approved standards. This person is responsible for the Sales and Marketing Department, as well as the overall smooth operation of training in cooperation with the Head of Training. Moreover, this person is responsible for all financial negotiations with Global Air Services personnel and students. Finally, this person serves as the liaison between the local authorities and Global Air Services. The Accountable Manager occupies a seat at the Board of Global Air Services and he reports directly to it.

Deputy Accountable Manager

The nominated person acceptable to the Hellenic Civil Aviation Authority who ensures that the duties of the Accountable Manager are performed diligently and acts on behalf of the Accountable Manager when the latter is unavailable. He reports directly to the Accountable Manager.

Head of Training

The person approved by the Hellenic Civil Aviation Authority who has the overall responsibility for ensuring the satisfactory integration of flying, synthetic and theoretical training. This person is responsible for the overall supervision of all students' progress and their periodical evaluations. Moreover, this person is closely monitoring the Chief Instructors, and he periodically evaluates them in order to ensure training is conducted to the approved standards. This person holds all required qualification according to APPENDIX 1 JAR-FCL 1.055 paragraph 14. He holds ATPL(A) license, he has extensive training experience as flight instructor, and he possess excellent managerial capabilities. Finally, the Head of Training occupies a seat at the Board of Global Air Services and he reports directly to it and the Accountable Manager.

Deputy Head of Training

The person approved by the Hellenic Civil Aviation Authority who ensures that the duties of the Head of Training are performed diligently and acts on behalf of the Head of Training when the latter is

unavailable. This person holds all required qualification according to APPENDIX 1 JAR-FCL 1.055 paragraph 14. He reports directly to the Head of Training.

Chief Flight Instructor

The person approved by the Hellenic Civil Aviation Authority who has the responsibility for ensuring the satisfactory level of flying and synthetic training is maintained. This person is responsible for the supervision of all students' flying and synthetic training progress and their periodical evaluations. Moreover, this person is closely monitoring all Flight and Synthetic Flight Instructors, and he periodically evaluates them in order to ensure training is conducted to the approved standards. This person holds all required qualification according to APPENDIX 1 JAR-FCL 1.055 paragraph 19. He holds ATPL(A) license and all ratings related to the flying training conducted, he has extensive training experience as flight instructor, he has completed more than 1000 hours as pilot-in-command and more than 500 hours as flight instructor. He occupies a seat at the Board of Global Air Services and reports directly to Head of Training.

Deputy Chief Flight Instructor

The person approved by the Hellenic Civil Aviation Authority who ensures that the duties of the Chief Flight Instructor are performed diligently and acts on behalf of the Chief Flight Instructor when the latter is unavailable. This person holds all required qualification according to APPENDIX 1 JAR-FCL 1.055 paragraph 15. He reports to the Chief Flight Instructor and the Head of Training.

Chief Ground Instructor

The person approved by the Hellenic Civil Aviation Authority who has the responsibility for ensuring the satisfactory level of theoretical training is maintained. This person is responsible for the supervision of all students' theoretical training progress and their periodical evaluations. Moreover, this person is closely monitoring all Ground Instructors and he periodically evaluates them in order to ensure training is conducted to the approved standards. This person holds all required qualification according to APPENDIX 1 JAR-FCL 1.055 paragraph 15. He has a practical background in aviation and extensive experience as a ground instructor. He occupies a seat at the Board of Global Air Services and reports directly to the Head of Training.

Deputy Chief Ground Instructor

The person approved by the Hellenic Civil Aviation Authority who ensures that the duties of the Chief Ground Instructor are performed diligently and acts on behalf of the Chief Ground Instructor when the latter is unavailable. He reports to the Chief Ground Instructor and the Head of Training.

Quality Manager

The independent person acceptable to the Hellenic Civil Aviation Authority who is responsible for the management of the Quality System, both in terms of its monitoring function and in terms of requesting corrective actions. This person is monitoring activities in the field of training in order to verify that the quality standards required by Global Air Services are being upheld under the supervision of the Head of Training and Chief Instructors. The Quality Manager has direct access to the Accountable Manager and Head of Training. He reports directly to the Board of Global Air Services.

Quality Auditor

A person responsible for carrying out quality audits. In addition to the Quality Manager, an auditor may be another suitably qualified employee of the company (who may perform certain audits to ensure that the independence of quality auditing is demonstrated) or a part-time, external auditor employed to carry out specialised audits (e.g. audits of the maintenance management system).

Post Holders Table

Position	Name	Signature
Quality Manager	**Tsaktanis Markos**	
Accountable Manager	**Tsaktanis Petros**	
Deputy Accountable Manager	**Tsaktanis Alexandros**	
Head of Training	**Samprakos Marios**	
Deputy Head of Training	**Dallis Constantinos**	
Chief Flight Instructor	**Dallis Constantinos**	
Deputy Chief Flight Instructor	**Korkolis Nikolaos**	
Chief Ground Instructor	**Sklavenitis Gerasimos**	

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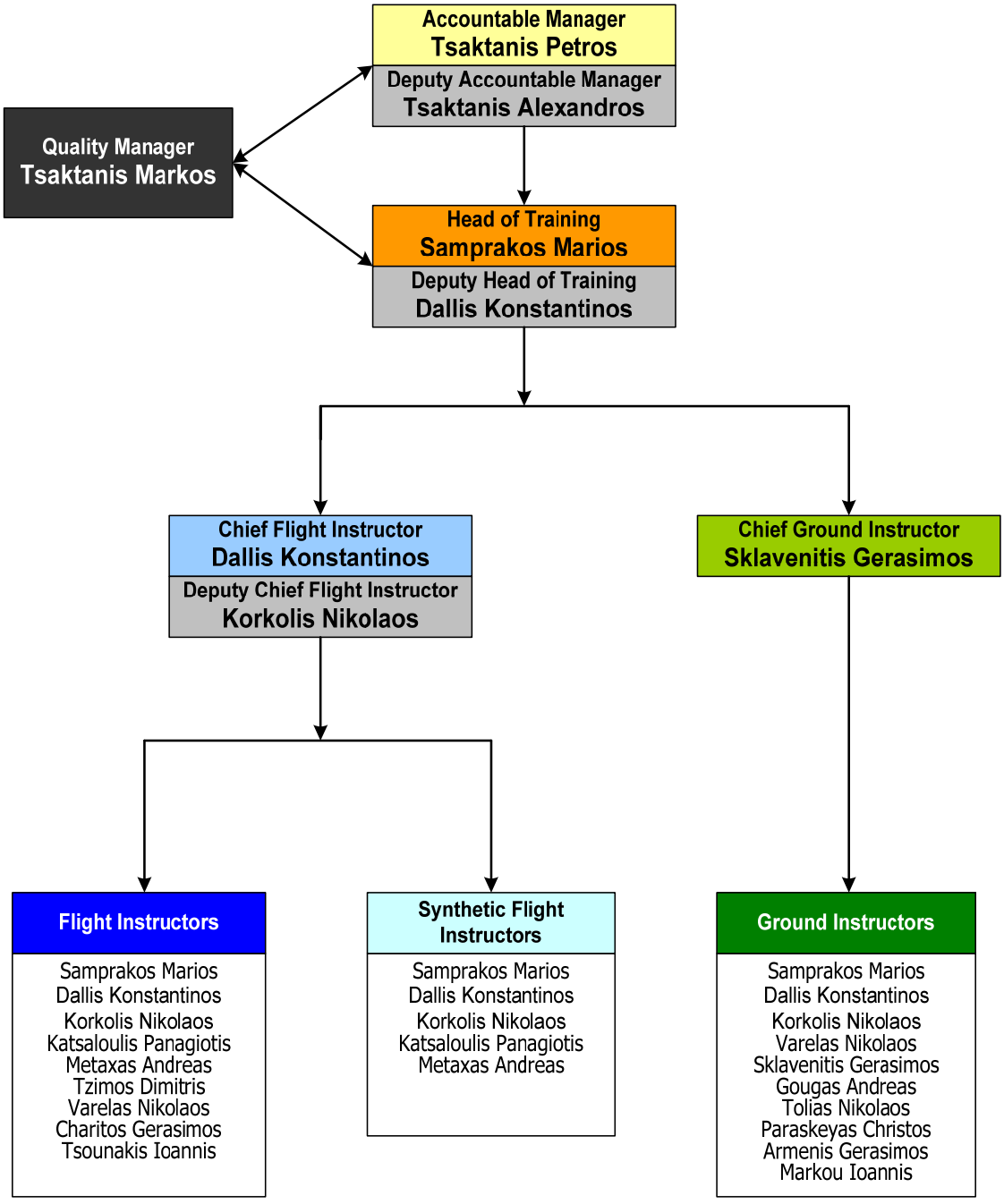
Operations Organization Chart



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List of Training Aeroplanes & Flight Simulator

According to APPENDIX 1 JAR-FCL 1.055 paragraph 25, an adequate fleet of training aeroplanes appropriate to the courses of training are provided. All aeroplanes are fitted with duplicated primary flight controls for use by the flight instructor and the student. Moreover, all aeroplanes are suitably equipped for both visual and instrument flight training required. The fleet of aeroplanes provided is suitable for demonstrating stalling and spin avoidance.

In addition to the fleet of aeroplanes, a Flight and Navigation Procedure Trainer (FNPT II) is provided by Global Air Services. The FNPT II is suitable for the instrument ground training required. Refer to Global Air Services Training Manual for details on the specific syllabus of the instrument ground training that the FNPT II is approved for.

Global Air Services approved training fleet:

Aeroplane Class	Registration Number	Manufacturer & Model	Serial Number
Single Engine Piston	**SX-ARA**	**Piper Warrior II PA-28-161**	**28-8316053**
Single Engine Piston	**SX-ARC**	**Piper Archer III PA-28-181**	**2843188**
Single Engine Piston	**SX-ARD**	**Piper Warrior III PA-28-161**	**2842158**
Multi Engine Piston	**SX-BDL**	**Piper Aztec PA-23-250E**	**27-735081**
Multi Engine Piston	**SX-BTC**	**Piper Seminole PA-44-180**	**4496226**
FNPT II	**-**	**ELITE S812 FNPT II (Piper Seneca III)**	**119-60118-S-1EX**

Base Aerodrome

Global Air Services uses Megara Airport (**LGMG**) as its Base Aerodrome. Megara Airport is located West of Attica (N37.58.58, E023.22.00). The runway is oriented East-West (08-26) with 4.000ft length and with 20ft elevation.

Facilities

Global Air Services uses the following facilities to ensure the required standards of training:

Flight Training Facilities

Global Air Services Operation Facilities at Megara Airport are in compliance with APPENDIX 1 JAR-FCL 1.055 paragraph 28. An operations room to control flying and synthetic training operations is provided. In addition, adequate approved flight planning rooms with current maps, charts, AIS and meteorological information are provided for preparation of training, briefing and debriefing. Moreover, there are available maps showing standard cross-country routes and restricted areas, in order to ensure high standards of training. At the Megara Airport Facilities there are also adequate briefing rooms available for both flying and synthetic training preparation. There are suitable offices for flight and synthetic flight instructors as well as their supervisors, Head of Training and Chief Flight Instructor to ensure that reports of the students' training progress are properly written and stored. Finally, a comfortable, suitable in size lounge is available to ensure that both students and staff can rest if needed.

Theoretical Training Facilities

Global Air Services Operation Facilities at Piraeus, Filonos 79-81 third floor, are in compliance with APPENDIX 1 JAR-FCL 1.055 paragraph 29. Adequate furnished classrooms for residential theoretical knowledge instruction, with suitable demonstration equipment are provided at the Piraeus Facilities. Moreover, a reference library containing the theoretical syllabus and suitable offices for ground instructors as well as their supervisor, Chief Ground Instructor to ensure that reports of the students' training progress are properly written and stored. Finally, a comfortable, suitable in size lounge is available to ensure that both students and staff can rest if needed.

Flight Instructors Qualifications & Responsibilities

According to Global Air Services standards, the flight instructor must have above average flying ability, a sound knowledge of the principles of learning techniques, and a dedicated attitude towards his role. The quality of his performance, and hence his product, is essential for the overall success of aviation training. Each flight instructor has been personally evaluated and approved by the Chief Flight Instructor and the Head of Training. Before the flight instructor is employed by the Accountable Manager, he has shown the Chief Flight Instructor and the Head of Training his flying and instructional abilities with a check ride and a formal interview. Each flight Instructor holds at least a CPL(A) with Instrument (IR) and Flight Instructor (FI) Rating and a valid Class 1 Medical Certificate. A Contract of Agreement is formally signed by the Accountable Manager on behalf of Global Air Services and the flight instructor. Each flight instructor has an official file at Global Air Services including all his/hers pilot licenses, ratings, authorizations, valid medical, previous aviation experience and a complete Curriculum Vitae (C.V.). It is his responsibility to see that his personal file is updated when necessary as well as his license, ratings and medical are always valid. The flight instructors reports directly to the Chief Flight Instructor.

In particular the flight instructor's responsibilities include:

- To follow JAA regulations
- To follow Global Air Services Operations & Training Manual
- To ensure that both him/her and the student is wearing Global Air Services uniform
- To ensure that each training session has sufficient briefing & debriefing time
- To personally fill out the Aircraft Technical Log after each flight he/she is flying
- To personally fill out the Flight Log after each flight he/she is flying
- To personally fill out the Exercise Report Sheet after each training session he/she is flying
- To always be present during refueling of the aeroplane he/she is flying
- To personally fill out the Refueling Log during refueling of the aeroplane he/she is flying
- To ensure that the documents are in order & on board of the aeroplane he/she is flying
- To ensure the aeroplane is in decent condition after each flight he/she is flying
- To report immediately any malfunction of the aeroplane he/she is flying
- To report the students' status of progress to Head of Training

Synthetic Flight Instructors Qualifications & Responsibilities

According to Global Air Services standards, the synthetic flight instructor must have a sound knowledge of the principles of learning techniques, and a dedicated attitude towards his role. The quality of his performance, and hence his product, is essential for the overall success of aviation training. Each synthetic flight instructor has been personally evaluated and approved by the Chief Flight Instructor and the Head of Training. Before the synthetic flight instructor is employed by the Accountable Manager, he has shown the Chief Flight Instructor and the Head of Training, his synthetic flying and instructional abilities with a simulated check ride and a formal interview. Each synthetic flight Instructor holds at least a CPL(A) with Instrument (IR) and Flight Instructor (FI) Rating or an Instrument Flight Instructor Rating (IRI) and a valid Class 1 Medical Certificate. A Contract of Agreement is formally signed by the Accountable Manager on behalf of Global Air Services and the synthetic flight instructor. Each synthetic flight instructor has an official file at Global Air Services including all his/hers pilot licenses, ratings, authorizations, valid medical, previous aviation experience and a complete Curriculum Vitae (C.V.). It is his responsibility to see that his personal file is updated when necessary as well as his license, ratings and medical are always valid. The synthetic flight instructors reports directly to the Chief Flight Instructor.

In particular the synthetic flight instructor's responsibilities include:

- To follow JAA regulations
- To follow Global Air Services Operations & Training Manual
- To ensure that both him/her and the student is wearing Global Air Services uniform
- To ensure that each training session has sufficient briefing & debriefing time
- To personally fill out the Flight Log after each training session
- To personally fill out the Exercise Report Sheet after each training session
- To ensure the simulator is in decent condition after each training session
- To report immediately any malfunction of the simulator
- To report the students' status of progress to Head of Training

Ground Instructors Qualifications & Responsibilities

According to Global Air Services standards, the ground instructor must have a sound knowledge of the principles of learning techniques, and a dedicated attitude towards his role. The quality of his performance, and hence his product, is essential for the overall success of aviation training. Each ground instructor has been personally evaluated and approved by the Chief Ground Instructor and the Head of Training. Before the ground instructor is employed by the Accountable Manager, he has shown the Chief Ground Instructor and the Head of Training, his instructional abilities with a test lecture on the subject he/she will instruct and a formal interview. Although a pilot license is not necessary, appropriate adequate aviation experience is required. A Contract of Agreement is formally signed by the Accountable Manager on behalf of Global Air Services and the ground instructor. Each ground instructor has an official file at Global Air Services including all previous teaching experience and a complete Curriculum Vitae (C.V.). It is his responsibility to see that his personal file is updated when necessary. The ground instructors reports directly to the Chief Ground Instructor.

In particular the ground instructor's responsibilities include:

- To follow JAA regulations
- To follow Global Air Services Operations & Training Manual
- To personally fill out the GS Report Sheet after each training session
- To ensure the classroom is in decent condition after each training session
- To report the students' status of progress to Head of Training

Student Overview

An applicant will become a student after enrolment to a specific pilot training course.

Student Enrolment

The student must have reached at least the age of 16 years old before enrolling to any course of Global Air Services. Note that there are pilot training courses, explained in detail in Global Air Services Training Manual that have additional requirements which must be met before the student's enrolment.

At the enrolment day the student must fill out the official Application Form, and produce all necessary documents. The application Form clearly states the student's personal information, previous aviation experience, the pilot training course applying for, the supporting documents required, and the date of enrolment. The supporting documents required at the enrolment, are clear, readable and validated photocopies of the originals.

In addition, the student signs a Contract Of Agreement with Global Air Services, specifically mentioning the financial agreement between the student and Global Air Services. Upon enrolment the student is required to read carefully this manual as well as the Global Air Services Training Manual in order to ensure that he/she fully understands the regulations of Global Air Services, as well as the specifics of the Pilot Training Course he/she is applying for.

Finally, if the specific pilot training course requires a deposit of payment, the student shall pay the deposit before the enrolment is complete.

Student Responsibilities & Discipline

Behaviour

The student's behaviour towards Global Air Services, it's staff, instructors and administration, as well as the other students and customers will be impeccable. There will be no tolerance of disrespect, verbal or other abuse, and generally inappropriate behaviour.

For students with inappropriate behaviour, the Head of Training is informed and if necessary disciplinary action will be taken., The Board of Global Air Services will be informed and disciplinary action will be taken for students with repeated acts of inappropriate behaviour. Disciplinary action could even mean the student's dismissal from Global Air Services.

Appearance

The student shall always have a decent appearance. When the student is flying he/she shall always be wearing Global Air Services uniform. The uniform consists of:

- White shirt
- Pair of Dark Blue (Blue Royal) trousers
- Pair of Black Shoes
- Pair of Epaulets (with appropriate number of stripes)
- Black Tie & Dark Blue (Blue Royal) sweater (Only from 1st October till 30th April)
- Global Air Services golden Wings (after first solo flight)

For students with inappropriate appearance, the Head of Training is informed and if necessary disciplinary action will be taken., The Board of Global Air Services will be informed and disciplinary action will be taken for students with repeated acts of inappropriate appearance. Disciplinary action could even mean the student's dismissal from Global Air Services.

Below is a sample of the golden wings and the Different epaulets with stripes.

Number of Stripes on Epaulets:

- One Stripe for Students who have completed the first solo flight
- Two Stripes for Students who have entered Phase 4, Instrument or CPL Training
- Three Stripes for Flight Instructors
- Four Stripes for Senior Flight Instructors, Chief Flight Instructor and Head of Training.

Theoretical Completion

The student when completing any theoretical course is awarded a Certificate of Theoretical Completion. Depending on the course, different requirements are met. Absences must not exceed 20% of the total lectures' duration on any course.

In addition to the minimum attendances a student shall have:

- For ATPL theory completion at least one sample examination passed for each subject with a grade equal or higher than 85%.
- For CPL theory completion at least one sample examination passed for each subject with a grade equal or higher than 85%.
- For Instrument Rating theory completion at least one sample examination passed for each subject with a grade equal or higher than 85%.
- For PPL theory completion at least one sample examination passed with a grade equal or higher than 85%.
- For Multi Engine Class Rating theory completion at least one sample examination passed with a grade equal or higher than 85%.
- For any Refresher theory completion at least one sample examination passed with a grade equal or higher than 85%.
- For Flight Instructor theory completion at least one successful presentation is required.

Flight Training

The student will be informed for his flight schedule from Global Air Services administration by telephone one day prior to the flight.

The student undertaking flight training will always:

- Be present at the airport at least one hour before the flight commence, unless otherwise informed by administration or his/hers Flight Instructor.
- Wear Global Air Services uniform.
- Be prepared for the flight training exercise as explained in Global Air Services Training Manual.
- Be carrying on him/her the valid medical certificate if flying as Pilot-in-Command or solo.
- Be carrying on him/her the valid pilot license if flying as Pilot-in-Command.
- Be properly rested, and he/she will have not consumed alcohol for the last 24 hours before the flight.

The flight instructor responsible for the flight has the authority:

- To cancel or delay the flight if the student do not follow the above regulations.
- To cancel or delay the flight for safety reasons, and weather conditions, even if the student has a pilot license and acting as Pilot-in-Command.

The flight instructor will fill out an official Cancellation / Delay Form for any cancellation of a flight or delay of a flight longer than 30 minutes.

In the event that a student is responsible for a cancellation of a flight or delay of a flight longer than 30 minutes, the Chief Flight Instructor and the Head of Training will be informed and if necessary disciplinary action will be taken. The Board of Global Air Services will be informed and disciplinary action will be taken for students with repeated acts of cancellations or delays. Disciplinary action could even mean the student's dismissal from Global Air Services.

Course Completion

When completing any course the student will be awarded a Certificate of Course Completion. Depending on the course, different requirements have to be met. The student will have completed all Theoretical and Flight Training required as per Course requirements. Details on each Course requirements for completion are explained in Global Air Services Training Manual.

Before the student receives the Certificate of Course Completion, he/she will have paid in full the course fees as explained in the Contract of Agreement signed. Any student who has not fully settled the course fees will not be entitled to the Certificate of Course Completion or any other Certificate.

Student Previous Experience

The student's previous experience will be recognised according to JAR-FCL. For a student who holds a pilot license all previous experience will be credited according to JAR-FCL.

For a student without a pilot license a signed and stamped pilot logbook (from his/her past flight school) will be asked for a confirmation of the flight training, and in addition a certificate (from his/her past flight school) clearly stating the exact flight training which has already been completed.

Finally, before Global Air Services can accept any previous experience, a check ride, at least one hour in duration, with a Global Air Services flight instructor will take place.

Student Transfer Procedure

According to JAR-FCL, a student may ask to transfer between flight schools.

For a student transferring from a flight school to Global Air Services, it is required to have the following:

- Certificate stating the student's flight training completed at the old flight school
- Signed and stamped list of the fight hours of the student from old flight school
- Certificate confirming that the student's financial account is settled with old flight school
- Enrolment of student to Global Air Services with necessary documents
- A check ride, at least one hour in duration, with Global Air Services

For a student requesting a transfer from Global Air Services to another flight school, Global Air Services will provide the student the following:

- Certificate stating the student's flight training completed at Global Air Services
- Signed and stamped list of the fight hours of the student from Global Air Services
- Certificate confirming that the student's financial account is settled with Global Air Services
- Student Termination of Training Form signed both by Global Air Services and the student.

When a student transfers from Global Air Services, any financial balance towards Global Air Services will be settled immediately, and any financial balance towards the student will be paid back to the student with a bank cheque payable within the next twelve months.

Student's Training Termination Procedure

According to JAR-FCL, a student and/or the flight school may terminate the training.

For a student who terminates his/hers training, Global Air Services will provide the student the following:

- Certificate stating the student's flight training completed at Global Air Services
- Signed and stamped list of the fight hours of the student from Global Air Services
- Certificate confirming that the student's financial account is settled with Global Air Services

When a student terminates his/hers student with Global Air Services, any financial balance towards Global Air Services will be settled immediately, and any financial balance towards the student will be paid back to the student with a bank cheque payable within the next twelve months.

Disciplinary Action

In the event that a student cannot abide to Global Air Services rules and regulations as provided above, disciplinary action will take place. First of all, the student will be asked to see the Head of Training in order to discuss the student's problem. If the problem is more complicated or the Head of Training is unable to solve it, then the student will be asked to see The Board of Global Air Services.

Disciplinary actions that may be taken from the Head of Training:

- A reprimand to the student appended to the student file
- A severe reprimand to the student appended to the student file
- Refer the matter to the Board of Global Air Services

Disciplinary actions that may be taken from the Board of Global Air Services:

- A reprimand to the student appended to the student file
- A severe reprimand to the student appended to the student file
- A severe reprimand to the student appended to the student file and a temporary dismissal
- Permanent dismissal from Global Air Services and official notification of Hellenic Civil Aviation Authorities explaining in detail the reasons of the dismissal.

The Board of Global Air Services has the authority to consider special circumstances that might have rendered a student unable to comply with some of Global Air Services rules and regulations as stated in this manual.

Flight Operations Overview

All training, or rental (Pilot-in-Command) flights with one of Global Air Services aeroplanes are taking place under the rules and regulations of Global Air Services with no exceptions.

Flight Block is the time the aeroplane is available for flight. Flight Instructors, students and rental pilots are required to arrive at the airport at least one hour prior to the starting time of the flight block they are assigned for. Global Air Services daily flight schedule will be announced in flight blocks. The flight time shall begin no later than 30 minutes after the flight block begins, and end at least 10 minutes before the flight block ends. A flight must never exceed the flight block assigned to it, except for safety reasons, or extreme weather conditions.

Flight Time is the time the aeroplane is operational, from master battery start till shut down. Flight time is the flight duration that is recorded in a pilot's logbook, and also is the duration that students and rental pilots are being charged for. Although Global Air Services fleet of aeroplanes are equipped with Hobbs counters, calculating the exact flight time, it is the responsibility of the flight instructor or the rental pilot to note down the exact flight time using conventional timepieces (a watch). Flight Time is recorded on the **Flight Log** document that all flight instructors, students, and rental pilots are responsible to know how to fill out.

Sector Time is the time the aeroplane is airborne, from take off till landing. Sector time is recorded on the **Flight Log** and the **Aircraft Technical Log** document that all flight instructors, students, and rental pilots are responsible to know how to fill them out.

Briefing Time is the time the flight instructor will spend with the student before the flight training lesson, explaining the objectives of the lesson, and providing the student with the necessary theoretical knowledge for successfully completing the flight lesson.

Debriefing Time is the time the flight instructor will spend with the student after the flight training lesson, discussing and evaluating the student's performance. At all training flights, dual, solo or Pilot-in-Command, the flight instructor shall spent sufficient time for briefing and debriefing, appropriate to the flight lesson conducted. The minimum combined duration of briefing and debriefing of any exercise is 30 minutes, while the maximum will be decided by the flight instructor responsible.

Operations Department consists of the personnel responsible for all flight and ground operations of Global Air Services. Operations Department manager is the Head of Training and his assistants. While any flight is ongoing at least one person of the Operations Department is reachable by telephone. Operations Department is finally responsible for Flight Schedule.

On duty personnel is the appointed personnel responsible of overseeing all operations at the airport base. He/she is the first line of contact for the students, and other customers and he/she is available during any Global Air Services aeroplanes operation.

Hierarchy during a Flight

During training flights, dual, solo or Pilot-in-Command, when the student does not hold a pilot license, the flight instructor has the final command, authority and absolute responsibility over flight safety.

During Pilot-in-Command flights, when the student holds a pilot license, and the flight instructor is aboard the aeroplane, the flight instructor has the final command, authority and absolute responsibility over the flight safety.

During Pilot-in-Command flights, when the student holds a pilot license, and the flight instructor is not aboard the aeroplane, the student pilot has absolute responsibility over the flight safety.

Pilot-in-Command Flights Overview & Responsibilities

When a safety pilot is onboard, in order to rent an aeroplane of Global Air Services fleet, for leisure or built-up of flight experience the pilot shall have at least:

- A Valid JAA Private Pilot Licence with appropriate Valid Ratings
- A Valid JAA Medical Certificate appropriate to the license he/she is holding

When a safety pilot is **not** onboard, in order to rent an aeroplane of Global Air Services fleet, for leisure or built-up of flight experience the pilot shall have at least:

- A Valid JAA Private Pilot Licence with appropriate Valid Ratings
- A Valid JAA Medical Certificate appropriate to the license he/she is holding
- For single engine aeroplanes: At least 50 hours total flight time experience
- For multi engine aeroplanes: At least 200 hours total flight time experience, including at least 50 hours total flight time experience on multi engine class
- A successful check ride with the aeroplane with a Global Air Services safety pilot at least 14 days prior to the rental

Note that the pilot will always carry on him/her his License and Medical even if a safety pilot is onboard and he/she is required to show them at the Global Air Services dispatcher before the rental of the aeroplane.

Carriage of Passengers Procedure & Limitations

During dual training flights the carriage of passengers is permitted for training reasons, only if the flight instructor responsible authorises it.

During Solo training flights the carriage of passengers is **strictly** forbidden.

During Pilot-in-Command flights the carriage of passengers is permitted with the responsibility of the Pilot-in-Command and with the condition that the flight is not of commercial nature.

Safety Pilot Overview & Responsibilities

A safety pilot is a pilot who is qualified to act as Pilot-in-Command on the specific class of aeroplane and carried onboard the aeroplane for the purpose of taking over control for safety reasons during a flight. A safety pilot will always be a Global Air Services employee and he/she will be holding at least a commercial pilot license.

In particular the safety pilot is responsible:

- To follow JAA regulations
- To follow Global Air Services Operations' rules and regulations
- To personally fill out the Aircraft Technical Log after each flight he/she is flying
- To personally fill out the Flight Log after each flight he/she is flying
- To always be present during refueling of the aeroplane he/she is flying
- To personally fill out the Refueling Log during refueling of the aeroplane he/she is flying
- To ensure that the documents are in order & on board of the aeroplane he/she is flying
- To ensure that the aeroplane is in a decent condition after each flight of the aeroplane he/she is flying
- To report immediately any malfunction of the aeroplane he/she is flying

Before the flight the safety pilot is responsible to discuss with his/hers Pilot-in-Command the circumstances under which he will intercede and take control of the aeroplane. The means of communication between the Pilot-in-Command and the safety pilot will be discussed before the flight.

In the event that the safety pilot deems necessary to take over the control of the aeroplane from the Pilot-in-Command, the exact following words will be spoken:

Safety Pilot: "I have control"
Pilot-in-Command: "You have control"
Safety Pilot: "I have control"

In the event that the Pilot-in-Command deems necessary to hand over the control of the aeroplane to the safety pilot, the exact following words will be spoken:

Pilot-in-Command: "You have control"
Safety Pilot: "I have control"
Pilot-in-Command: "You have control"

In the event that the safety pilot took over the control of the aeroplane from the Pilot-in-Command, a formal report will be filled out from the safety pilot to the Chief Flight Instructor and Head of Training explaining in detail why that course of action was necessary and the safety pilot's recommendations about the Pilot-in-Command.

Procedure & Authorization of a Flight

All pilots flying, either students, rentals (built-up time) or flight instructors are informed for the flight schedule from the Operations Department. No flight will take place unless it is authorised by the Operations Department. The flight schedule is daily updated due to maintenance schedule of the fleet and weather conditions updates. At least one day prior to any flight a telephone or e-mail confirmation will be available to the pilots flying from the Operations Department.

When the flight is of training nature, the assigned flight instructor is responsible for the flight's final authorization. The on duty flight instructor, has the authority to cancel or delay any rental flight, if he/she deems that this is necessary for the safety of the flight.

The Operations Department and the Chief Flight Instructor will be immediately informed of any delays or cancellations of flights. The Head of Training will be informed with a written report filled out by the flight instructor who authorized the cancellation of flights the following day.

Procedure of a Flight Cancellation

When a flight is cancelled, an official Cancellation/Delay Report is filled out and sent to the Head of Training. The flight instructor who authorized the cancellation or the delay of the flight will be responsible to explain in this report the reasons of that actions.

When a student was responsible of the flight cancellation or delay his/hers flight instructor will fill out the report. When a Pilot-in-Command was responsible of the flight cancellation or delay, on duty flight instructor will fill out the report.

Flight Instructors Medical Certificate & Ratings

Flight Instructor shall always carry on him/her a Valid JAA Medical Certificate. Flight and Synthetic Flight Instructor shall always carry on him/her a Valid JAA Pilot License with the appropriate Valid Pilot Ratings.

Instructors Duty, Flight Time & Rest Period

The duty time of Flight, Synthetic Flight and Ground Instructors shall not exceed eight (8) hours per day, for five (5) days per week, no more than forty (40) hours per week, and no more than one hundred and fifty (150) hours per month. Moreover, the annual duty time shall not exceed one thousand three hundred (1300) hours.

The flight time for Flight, and Synthetic Flight Instructors shall not exceed eight (8) hours per day, for five (5) days per week, no more than thirty (30) hours per week, and no more than one hundred and twenty (120) hours per month. Moreover, the annual flight time shall not exceed nine hundred (900) hours.

The rest period of Flight, Synthetic Flight and Ground Instructors shall be at least ten (10) hours between duty days, and two full (2) days per week. Moreover, the annual rest period shall be at least two (2) months per year.

Student Flight Time & Rest Period

The flight time for students shall not exceed eight (8) hours per day, and no more than thirty (30) hours per week.

The rest period for students shall be at least twelve (12) hours between flight days.

Safety Issues & Incidents/Accidents Report Procedure

In the event of an incident the flight instructor responsible for the flight shall immediately notify the authorities and inform the Operations Department. If the flight is solo training, the student shall notify the authorities and his/hers flight instructor responsible. If the flight is not training the Pilot-in-Command shall notify the authorities and the on-duty personnel shall immediately inform the Operations Department about the following:

- The registration of the aeroplane
- The names and health status of the people onboard
- The available details of the incident
- The current location of the people onboard
- The current location of the aeroplane

The Operations Department shall immediately notify the Head of Training. The Head of Training shall immediately notify the Accountable Manager.

In the event of an accident the flight instructor responsible for the flight shall immediately notify the authorities and inform the Operations Department. If the flight is solo training, the student shall notify the authorities and his/hers flight instructor responsible. If the flight is not training, or the flight instructor responsible, or the Pilot-in-Command is not capable to notify the authorities (due to severe injury or death) the on-duty personnel shall immediately notify the authorities and inform the Operations Department about the following:

- The registration of the aeroplane
- The names and health status of the people onboard
- The available details of the accident
- The current location of the people onboard
- The current location of the aeroplane

The Operations Department shall immediately notify the Head of Training. The Head of Training shall immediately notify the Accountable Manager. The Operations Department shall notify the families of the people onboard if they are injured or dead.

Instructor Replacement

Replacement of an Instructor means that the Instructor will cease the training of a particular Student. An Instructor may be replaced for various reasons either temporarily or permanently. The Chief Instructor will make a report to the Head of Training, explaining the reasons of the replacement. The Head of Training will evaluate the situation and only he will authorise the replacement of the Instructor.

Following are the reasons that an Instructor may be temporarily replaced:

- Student complains about Instructor
- Instructor complains about Student

Following are the reasons that an Instructor may be permanently replaced:

- Repeatable Student complains about Instructor
- Repeatable Instructor complains about Student
- Poor training performance reported by Chief Instructor

SECTION 2

TECHNICAL

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List of Aeroplanes Documents

The aeroplanes of Global Air Services have at all times the following documents onboard:

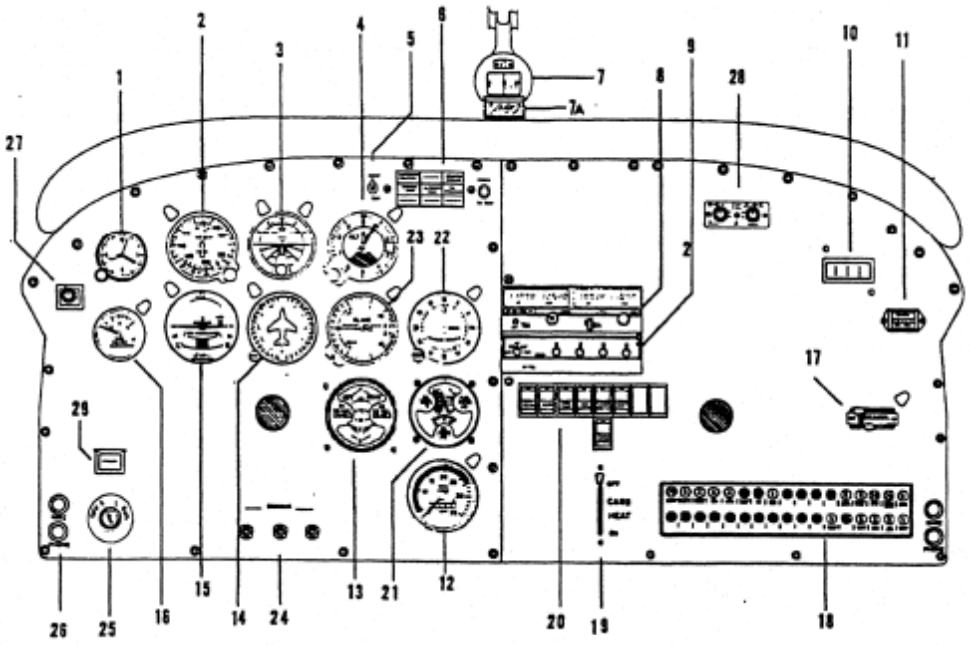
- Certificate of Airworthiness
- Certificate of Registration
- Certificate of Insurance
- Aircraft Station License
- Pilot Operating Handbook (Fully Updated)
- Normal and Emergency Procedures Checklist
- Weight & Balance Sheet

The above documents are also located in a secure file at Global Air Services offices.

Radio and Radio Navigation Aids

The aeroplanes of Global Air Services are fitted with two (2) Radio Communication Systems VHF. Proper training to all Flight Instructors and student pilots is provided with respect to aeroplane Radio Communication Systems and the following Radio Navigation Equipment:

- VOR Navigation Receiver
- Distance Measuring Equipment (DME)
- ADF Receiver
- Global Positioning System (GPS)



Cockpit of PA-28-161.

1. CLOCK (ELECTRIC) (OPTIONAL)
2. AIRSPEED INDICATOR
3. ATTITUDE GYRO
4. ALTIMETER
5. DAY/NIGHT SWITCH
6. ANNUNCIATOR PANEL
7. COMPASS (MAGNETIC)

7a. COMPASS CORRECTION CARD

8. COMM / NAV RADIO
9. TRANSPONDER

10 AMMETER (DIGITAL)

11. HOUR METER
12. TACHOMETER (RPM)
13. FUEL QUANTITY
14. DIRECTIONAL GYRO
15. TURN & BANK
16. VACUUM GAUGE
17. CABIN AIR CONTROL WINDSHIELD DEFROST AND HEAT
18. CIRCUIT BREAKER PANEL
19. CARB. HEAT
20. SWITCH PANEL
21. ENGINE GAUGE, OIL TEMP OIL AND FUEL PRESSURE, .
22. VOR/LOC NAVIGATION INDICATOR
23. VERTICAL SPEED INDICATOR
24. LIGHT CONTROL AND DIMMING SWITCH, INST.PANEL,& RADIOS
25. MAGNETO & START SWITCH
26. MIC/PHONE JACKS
27. ELT CONTROL
28. INTERCOM CONTROL

29 ENGINE PRIMER (ELECTRIC)

Limitations

The aeroplanes must be operated as a normal or utility category aeroplanes in compliance with the operating limitations stated in the form of placards and markings and those given at the individual Pilot Operating Handbook (POH) of each aeroplane in Section 2.

Proper training to all Flight Instructors and student pilots is provided with respect to all aeroplane limitations and with greater emphasis on the following:

- Airspeed Limitations
- Airspeed Indicators Markings
- Power Plant Limitations
- Power Plant Instrument Markings
- Weight Limits
- Center of Gravity Limits
- Manoeuvre Limits
- Flight Load Factors
- Fuel Limitations

POWER PLANT INSTRUMENT MARKINGS

(a) Tachometer	
Green Arc (Normal Operating Range)	500 to 2700 RPM
Red Line (Takeoff Power)	2700 RPM
(b) Oil Temperature	
Green Arc (Normal Operating Range)	100° to 245°F
Red Line (Maximum)	245°F
(c) Oil Pressure	
Green Arc (Normal Operating Range)	55 PSI to 95 PSI
Yellow Arc (Caution Range) (Idle)	25 PSI to 55 PSI
Yellow Arc (Ground Warm-Up)	95 PSI to 115 PSI
Red Line (Minimum)	25 PSI
Red Line (Maximum)	115 PSI
(d) Fuel Pressure	
Green Arc (Normal Operating Range)	0.5 PSI to 8 PSI
Red Line (Minimum)	0.5 PSI
Red Line (Maximum)	8 PSI
(e) Vacuum Gauge	
Red Line (Minimum)	4.8 in Hg
Green Arc (Normal Operating Range)	4.8 in Hg. to 5.2 in Hg
Red Line (Maximum)	5.2 in Hg

Example of Power Plant Instrument Markings Limitations, for the PA-28-181.

Emergency Procedures

Detailed description of individual emergency procedures of each aeroplane in Global Air Services fleet is found at the individual Pilot Operating Handbook (POH) of each aeroplane in Section 3.

Proper training to all Flight Instructors and student pilots is provided with respect to all aeroplane emergency procedures and with greater emphasis on the following:

- Engine Fire During Start
- Engine Fire During Flight
- Engine Power Loss During Takeoff
- Engine Power Loss During Flight
- Engine Power Loss During Landing (Power off Landing)
- Engine Roughness
- Loss of Oil Pressure
- High Oil Temperature
- Loss of Fuel Pressure
- Electrical Failures
- Electrical Overloads
- Carburetor Icing
- Spin Recovery

Normal Procedures

Detailed description of individual normal procedures of each aeroplane in Global Air Services fleet is found at the individual Pilot Operating Handbook (POH) of each aeroplane in Section 4.

Proper training to all Flight Instructors and student pilots is provided with respect to all aeroplane normal procedures and with greater emphasis on the following:

- Airspeeds for safe Operations
- Preflight Checks
- Before Starting Engine
- Starting Engine when Cold
- Starting Engine when Hot
- Starting Engine when Flooded
- Starting with External Power Source
- Warm-Up
- Taxiing
- Ground Check
- Before Takeoff
- Takeoff
- Climb
- Cruising
- Descent
- Approach and Landing
- Stopping Engine
- Parking

Minimum Equipment List (MEL)

Aeroplane Type: PA-28-161 Warrior II	Aeroplane Registration: SX-ARA

Item	System	Installed	Required	Remarks & Exceptions
1	Anti-Collision & Strobe lights	3	**2**	Red anti-collision light may be inoperative provided all strobe lights are operative
2	Flight Deck Lighting			May be inoperative for daylight flights
3	Torch	1		Can be missing for daylight flights. For night flights spare batteries must be available
4	Navigation / Position lights			One may be inoperative for daylight flights
5	Landing Lights	1		May be inoperative for daylight flights
6	Magnetic Compass	1	**1**	
7	Clocks	1		May be inoperative for VFR flights
8	Altimeters	1	**1**	
9	Airspeed Indicators	1	**1**	
10	Vertical Speed Indicator	1	**1**	
11	Turn and Slip Indicators & Turn Coordinator	1		May be inoperative for VFR flights provided that the slip indicator is operative
12	Attitude Indicators	1	**1**	
13	Directional Gyro	1	**1**	
14	Pitot Heating System	1		May be inoperative for VFR day and VMC only provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
15	Auto Pilot	1		May be wholly or partially inoperative provided: a) No electrical or mechanical fault exists that will have an adverse effect on any flight control function, and b) Approach minima do not require their use
16	Windshield Heating	1		Same with item 14
17	Stall warning Vane	1	**1**	
18	Flight Crew Intercom	1		May be inoperative provided: Procedures are not dependent upon its use & Alternate procedures are established and used
19	Headsets And Microphones			The following combination is required for any kind of flight: (a)Two headsets (b)Two microphones (c)One headset and one microphone In case (a) at least one

				push to talk button must be operative
20	Main Door latches	2	**2**	
21	First Aid Kit	1	**1**	
22	Hand Fire Extinguisher	1	**1**	Provided that the fire extinguisher is checked and the expiration date is written clearly
23	Crash Axe	1	**1**	
24	Emergency Locator Transmitter	1		May be inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first
25	Lifejackets			Any in excess of minimum required may be missing
26	Life Raft for Extended Over water Flights			
27	Audio Selector Panel	1	**1**	
28	Push to Transmit Switches	2		One may be inoperative in case that two headsets are in use by the crew members
29	Radio Communication Systems VHF for VFR flights	2	**1**	Any in excess of one, and not powered by an emergency bus, may be inoperative.
30	Frequency Transfer	2	**1**	Provided that it belongs to the operative VHF
31	Frequency Selector	1	**1**	Provided that it belongs to the operative VHF
32	Frequency Indication	1	**1**	Provided that it belongs to the operative VHF
33	SSR Transponder	1		May be inoperative provided agreement can be obtained from all ATC authorities
34	Radio Communication Systems VHF for IFR flights	2	**2**	Any in excess of two, and not powered by a emergency bus, may be inoperative
35	Frequency Transfer	2	**2**	
36	Frequency Selector	2	**2**	
37	Frequency Indication	2	**2**	
38	SSR Transponder	1	**1**	
39	VOR Navigation Receivers	2	**1**	Any in excess of one may be inoperative provided: Operational procedures, are not based only on VOR signals, and Both ADF and DME are operative
40	ADF Receiver	1		May be inoperative provided: One DME, two VORs, or alternative approved navigational equipment are operative, and Ops do not require their use
41	Marker Beacon	1		May be inoperative for IFR, provided approach procedures do not require marker fixes. May be inoperative for VFR
42	Distance Measuring Equipment (DME)	1		May be inoperative provided: a) One ADF, two VORs or alternative approved navigational equipment are operative, and b) Operational procedures do not require their use

43	ILS	1		May be inoperative for IFR operations, provided approach minima do not require their use. OR May be inoperative for VFR operations
44	Seat Belts and Harnesses	4		Inoperative seats are not occupied
45	Tachometers (RPM Indicators)	1	**1**	
46	Oil Temperature	1	**1**	
47	Oil Press Indicators	1	**1**	
48	Fuel Quantity Indicators	2	**1**	Is capable to indicate at least empty, full and half indications to corresponding tanks or The flight will start with full tanks, the duration is less than 3 hours
49	Carburetor Heat	1		Can be inoperative provided that the OAT during every phase the flight is more than +20°C and there is not present visible moisture and the OAT indicator is operative
50	Outside Air Temperature Indicators	1		Can be inoperative provided: The commander ensures that the OAT is more than +20°C and there is not present visible moisture The flight is day VFR / VMC
51	Vacuum Pumps	1	**1**	
52	Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
53	Low Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
54	Instrument Lights			One or more can be inoperative for daylight flights
55	Alternate Static	1	**1**	
56	Alternators	1	**1**	
57	Batteries	1	**1**	
58	Alternators Output indicators	1	**1**	
59	Alternators Inoperative Indicators	1		Can be inoperative provided that the alternator output indicator is operative and the flight has as destination the main base
60	Electric fuel pumps	1	**1**	
61	Tow Bar	1		May be missing provided that another safe procedure of towing the aeroplane exists and is acceptable by the commander
62	Fuel Strainer	1		May be missing providing that there is another procedure to check fuel in the aeroplane's fuel tanks and strainer for contamination
63	Fuel Drain Locations	3		One or more may be inoperative provided that there is another procedure to check the fuel in the aeroplane's fuel tanks and strainer for contamination

64	Wing Stall Stripes	2	**2**	
65	Auxiliary Vacuum Pump	1		May be inoperative provided: The flight is daylight VFR flight and There is a placard on the instrument panel warning the commander for the malfunction

Minimum Equipment List (MEL)

Aeroplane Type: PA-28-181 Archer III				Aeroplane Registration: SX-ARC
Item	System	Installed	Required	Remarks & Exceptions
1	Anti-Collision & Strobe lights	3	**2**	Red anti-collision light may be inoperative provided all strobe lights are operative
2	Flight Deck Lighting			May be inoperative for daylight flights
3	Torch	1		Can be missing for daylight flights. For night flights spare batteries must be available
4	Navigation / Position lights			One may be inoperative for daylight flights
5	Landing Lights	1		May be inoperative for daylight flights
6	Magnetic Compass	1	**1**	
7	Clocks	1		May be inoperative for VFR flights
8	Altimeters	1	**1**	
9	Airspeed Indicators	1	**1**	
10	Vertical Speed Indicator	1	**1**	
11	Turn and Slip Indicators & Turn Coordinator	1		May be inoperative for VFR flights provided that the slip indicator is operative
12	Attitude Indicators	1	**1**	
13	Directional Gyro	1	**1**	
14	Pitot Heating System	1		May be inoperative for VFR day and VMC only provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
15	Auto Pilot	1		May be wholly or partially inoperative provided: a) No electrical or mechanical fault exists that will have an adverse effect on any flight control function, and b) Approach minima do not require their use
16	Windshield Heating	1		Same with item 14
17	Stall warning Vane	1	**1**	
18	Flight Crew Intercom	1		May be inoperative provided: Procedures are not dependent upon its use & Alternate procedures are established and used
19	Headsets And Microphones			The following combination is required for any kind of flight: (a)Two headsets (b)Two microphones (c)One

				headset and one microphone In case (a) at least one push to talk button must be operative
20	Main Door latches	2	**2**	
21	First Aid Kit	1	**1**	
22	Hand Fire Extinguisher	1	**1**	Provided that the fire extinguisher is checked and the expiration date is written clearly
23	Crash Axe	1	**1**	
24	Emergency Locator Transmitter	1		May be inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first
25	Lifejackets			Any in excess of minimum required may be missing
26	Life Raft for Extended Over water Flights			
27	Audio Selector Panel	1	**1**	
28	Push to Transmit Switches	2		One may be inoperative in case that two headsets are in use by the crew members
29	Radio Communication Systems VHF for VFR flights	2	**1**	Any in excess of one, and not powered by an emergency bus, may be inoperative.
30	Frequency Transfer	2	**1**	Provided that it belongs to the operative VHF
31	Frequency Selector	1	**1**	Provided that it belongs to the operative VHF
32	Frequency Indication	1	**1**	Provided that it belongs to the operative VHF
33	SSR Transponder	1		May be inoperative provided agreement can be obtained from all ATC authorities
34	Radio Communication Systems VHF for IFR flights	2	**2**	Any in excess of two, and not powered by a emergency bus, may be inoperative
35	Frequency Transfer	2	**2**	
36	Frequency Selector	2	**2**	
37	Frequency Indication	2	**2**	
38	SSR Transponder	1	**1**	
39	VOR Navigation Receivers	2	**1**	Any in excess of one may be inoperative provided: Operational procedures, are not based only on VOR signals, and Both ADF and DME are operative
40	ADF Receiver	1		May be inoperative provided: One DME, two VORs, or alternative approved navigational equipment are operative, and Ops do not require their use
41	Marker Beacon	1		May be inoperative for IFR, provided approach procedures do not require marker fixes. May be inoperative for VFR
42	Distance Measuring Equipment (DME)	1		May be inoperative provided: a) One ADF, two VORs or alternative approved navigational equipment are operative, and b) Operational procedures do not require their use

43	ILS	1		May be inoperative for IFR operations, provided approach minima do not require their use. OR May be inoperative for VFR operations
44	Seat Belts and Harnesses	4		Inoperative seats are not occupied
45	Tachometers (RPM Indicators)	1	**1**	
46	Oil Temperature	1	**1**	
47	Oil Press Indicators	1	**1**	
48	Fuel Quantity Indicators	2	**1**	Is capable to indicate at least empty, full and half indications to corresponding tanks or The flight will start with full tanks, the duration is less than 3 hours
49	Carburetor Heat	1		Can be inoperative provided that the OAT during every phase the flight is more than +20°C and there is not present visible moisture and the OAT indicator is operative
50	Outside Air Temperature Indicators	1		Can be inoperative provided: The commander ensures that the OAT is more than +20°C and there is not present visible moisture The flight is day VFR / VMC
51	Vacuum Pumps	1	**1**	
52	Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
53	Low Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
54	Instrument Lights			One or more can be inoperative for daylight flights
55	Alternate Static	1	**1**	
56	Alternators	1	**1**	
57	Batteries	1	**1**	
58	Alternators Output indicators	1	**1**	
59	Alternators Inoperative Indicators	1		Can be inoperative provided that the alternator output indicator is operative and the flight has as destination the main base
60	Electric fuel pumps	1	**1**	
61	Tow Bar	1		May be missing provided that another safe procedure of towing the aeroplane exists and is acceptable by the commander
62	Fuel Strainer	1		May be missing providing that there is another procedure to check fuel in the aeroplane's fuel tanks and strainer for contamination
63	Fuel Drain Locations	3		One or more may be inoperative provided that there is another procedure to check the fuel in the aeroplane's fuel tanks and strainer for contamination

64	Wing Stall Stripes	2	**2**	
65	Auxiliary Vacuum Pump	1		May be inoperative provided: The flight is daylight VFR flight and There is a placard on the instrument panel warning the commander for the malfunction

Minimum Equipment List (MEL)

Aeroplane Type: PA-28-161 Warrior III				Aeroplane Registration: SX-ARD
Item	System	Installed	Required	Remarks & Exceptions
1	Anti-Collision & Strobe lights	3	**2**	Red anti-collision light may be inoperative provided all strobe lights are operative
2	Flight Deck Lighting			May be inoperative for daylight flights
3	Torch	1		Can be missing for daylight flights. For night flights spare batteries must be available
4	Navigation / Position lights			One may be inoperative for daylight flights
5	Landing Lights	1		May be inoperative for daylight flights
6	Magnetic Compass	1	**1**	
7	Clocks	1		May be inoperative for VFR flights
8	Altimeters	1	**1**	
9	Airspeed Indicators	1	**1**	
10	Vertical Speed Indicator	1	**1**	
11	Turn and Slip Indicators & Turn Coordinator	1		May be inoperative for VFR flights provided that the slip indicator is operative
12	Attitude Indicators	1	**1**	
13	Directional Gyro	1	**1**	
14	Pitot Heating System	1		May be inoperative for VFR day and VMC only provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
15	Auto Pilot	1		May be wholly or partially inoperative provided: a) No electrical or mechanical fault exists that will have an adverse effect on any flight control function, and b) Approach minima do not require their use
16	Windshield Heating	1		Same with item 14
17	Stall warning Vane	1	**1**	
18	Flight Crew Intercom	1		May be inoperative provided: Procedures are not dependent upon its use & Alternate procedures are established and used

19	Headsets And Microphones			The following combination is required for any kind of flight: (a)Two headsets (b)Two microphones (c)One headset and one microphone In case (a) at least one push to talk button must be operative
20	Main Door latches	2	**2**	
21	First Aid Kit	1	**1**	
22	Hand Fire Extinguisher	1	**1**	Provided that the fire extinguisher is checked and the expiration date is written clearly
23	Crash Axe	1	**1**	
24	Emergency Locator Transmitter	1		May be inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first
25	Lifejackets			Any in excess of minimum required may be missing
26	Life Raft for Extended Over water Flights			
27	Audio Selector Panel	1	**1**	
28	Push to Transmit Switches	2		One may be inoperative in case that two headsets are in use by the crew members
29	Radio Communication Systems VHF for VFR flights	2	**1**	Any in excess of one, and not powered by an emergency bus, may be inoperative.
30	Frequency Transfer	2	**1**	Provided that it belongs to the operative VHF
31	Frequency Selector	1	**1**	Provided that it belongs to the operative VHF
32	Frequency Indication	1	**1**	Provided that it belongs to the operative VHF
33	SSR Transponder	1		May be inoperative provided agreement can be obtained from all ATC authorities
34	Radio Communication Systems VHF for IFR flights	2	**2**	Any in excess of two, and not powered by a emergency bus, may be inoperative
35	Frequency Transfer	2	**2**	
36	Frequency Selector	2	**2**	
37	Frequency Indication	2	**2**	
38	SSR Transponder	1	**1**	
39	VOR Navigation Receivers	2	**1**	Any in excess of one may be inoperative provided: Operational procedures, are not based only on VOR signals, and Both ADF and DME are operative
40	ADF Receiver	1		May be inoperative provided: One DME, two VORs, or alternative approved navigational equipment are operative, and Ops do not require their use
41	Marker Beacon	1		May be inoperative for IFR, provided approach procedures do not require marker fixes. May be inoperative for VFR
42	Distance Measuring Equipment (DME)	1		May be inoperative provided: a) One ADF, two VORs or alternative approved navigational equipment are

				operative, and b) Operational procedures do not require their use
43	ILS	1		May be inoperative for IFR operations, provided approach minima do not require their use. OR May be inoperative for VFR operations
44	Seat Belts and Harnesses	4		Inoperative seats are not occupied
45	Tachometers (RPM Indicators)	1	**1**	
46	Oil Temperature	1	**1**	
47	Oil Press Indicators	1	**1**	
48	Fuel Quantity Indicators	2	**1**	Is capable to indicate at least empty, full and half indications to corresponding tanks or The flight will start with full tanks, the duration is less than 3 hours
49	Carburetor Heat	1		Can be inoperative provided that the OAT during every phase the flight is more than +20°C and there is not present visible moisture and the OAT indicator is operative
50	Outside Air Temperature Indicators	1		Can be inoperative provided: The commander ensures that the OAT is more than +20°C and there is not present visible moisture The flight is day VFR / VMC
51	Vacuum Pumps	1	**1**	
52	Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
53	Low Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
54	Instrument Lights			One or more can be inoperative for daylight flights
55	Alternate Static	1	**1**	
56	Alternators	1	**1**	
57	Batteries	1	**1**	
58	Alternators Output indicators	1	**1**	
59	Alternators Inoperative Indicators	1		Can be inoperative provided that the alternator output indicator is operative and the flight has as destination the main base
60	Electric fuel pumps	1	**1**	
61	Tow Bar	1		May be missing provided that another safe procedure of towing the aeroplane exists and is acceptable by the commander
62	Fuel Strainer	1		May be missing providing that there is another procedure to check fuel in the aeroplane's fuel tanks and strainer for contamination

63	Fuel Drain Locations	3		One or more may be inoperative provided that there is another procedure to check the fuel in the aeroplane's fuel tanks and strainer for contamination
64	Wing Stall Stripes	2	**2**	
65	Auxiliary Vacuum Pump	1		May be inoperative provided: The flight is daylight VFR flight and There is a placard on the instrument panel warning the commander for the malfunction

Minimum Equipment List (MEL)

Aeroplane Type: PA-44-180 Seminole				Aeroplane Registration: SX-BTC
Item	System	Installed	Required	Remarks & Exceptions
1	Anti-Collision & Strobe lights	3	**2**	Red anti-collision light may be inoperative provided all strobe lights are operative
2	Flight Deck Lighting			May be inoperative for daylight flights
3	Torch	1		Can be missing for daylight flights. For night flights spare batteries must be available
4	Navigation / Position lights			One may be inoperative for daylight flights
5	Landing Lights	1		May be inoperative for daylight flights
6	Magnetic Compass	1	**1**	
7	Clocks	1		May be inoperative for VFR flights
8	Altimeters	2	**1**	For VFR operations: Any in excess of one may be inoperative for day VMC only provided the operative altimeter is on the commander's side For IFR operations
9	Airspeed Indicators	1	**1**	
10	Vertical Speed Indicator	1	**1**	
11	Turn and Slip Indicators & Turn Coordinator	1		May be inoperative for VFR flights provided that the slip indicator is operative
12	Attitude Indicators	2	**1**	For VFR operations: Any in excess of one may be inoperative for day VMC only provided the operative altimeter is on the commander's side For IFR operations
13	Directional Gyro	1	**1**	
14	Pitot Heating System	1		May be inoperative for VFR day and VMC only provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
15	Auto Pilot	1		May be wholly or partially inoperative provided: a) No electrical or mechanical fault exists that will have an adverse effect on any flight control function, and b) Approach minima do not require their use
16	Windshield Heating	1		Same with item 14
17	Stall warning Vane	1	**1**	
18	Flight Crew Intercom	1		May be inoperative provided: Procedures are not dependent upon its use & Alternate procedures are

				established and used
19	Headsets And Microphones			The following combination is required for any kind of flight: (a)Two headsets (b)Two microphones (c)One headset and one microphone In case (a) at least one push to talk button must be operative
20	Main Door latches	2	**2**	
21	First Aid Kit	1	**1**	
22	Hand Fire Extinguisher	1	**1**	Provided that the fire extinguisher is checked and the expiration date is written clearly
23	Crash Axe	1	**1**	
24	Emergency Locator Transmitter	1		May be inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first
25	Lifejackets			Any in excess of minimum required may be missing
26	Life Raft for Extended Over water Flights			
27	Audio Selector Panel	1	**1**	
28	Push to Transmit Switches	2		One may be inoperative in case that two headsets are in use by the crew members
29	Radio Communication Systems VHF for VFR flights	2	**1**	Any in excess of one, and not powered by an emergency bus, may be inoperative.
30	Frequency Transfer Switch	2	**1**	Provided that it belongs to the operative VHF
31	Frequency Selector Knob	1	**1**	Provided that it belongs to the operative VHF
32	Frequency Indication	1	**1**	Provided that it belongs to the operative VHF
33	SSR Transponder	1		May be inoperative provided agreement can be obtained from all ATC authorities
34	Radio Communication Systems VHF for IFR flights	2	**2**	Any in excess of two, and not powered by a emergency bus, may be inoperative
35	Frequency Transfer	2	**2**	
36	Frequency Selector	2	**2**	
37	Frequency Indication	2	**2**	
38	SSR Transponder	1	**1**	
39	VOR Navigation Receivers	2	**1**	Any in excess of one may be inoperative provided: Operational procedures, are not based only on VOR signals, and Both ADF and DME are operative
40	ADF Receiver	1		May be inoperative provided: One DME, two VORs, or alternative approved navigational equipment are operative, and Ops do not require their use
41	Marker Beacon	1		May be inoperative for IFR, provided approach procedures do not require marker fixes. May be inoperative for VFR

42	Distance Measuring Equipment (DME)	1		May be inoperative provided: a) One ADF, two VORs or alternative approved navigational equipment are operative, and b) Operational procedures do not require their use
43	ILS	1		May be inoperative for IFR operations, provided approach minima do not require their use. OR May be inoperative for VFR operations
44	Seat Belts and Harnesses	4		Inoperative seat belts are not occupied
45	Tachometers (RPM Indicators)	1	**1**	
46	Oil Temperature	1	**1**	
47	Oil Press Indicators	1	**1**	
48	Fuel Quantity Indicators	2	**1**	Is capable to indicate at least empty, full and half indications to corresponding tanks or The flight will start with full tanks, the duration is less than 3 hours
49	Carburetor Heat	1		Can be inoperative provided that the OAT during every phase the flight is more than +20°C and there is not present visible moisture and the OAT indicator is operative
50	Outside Air Temperature Indicators	1		Can be inoperative provided: The commander ensures that the OAT is more than +20°C and there is not present visible moisture The flight is day VFR / VMC
51	Vacuum Pumps	1	**1**	
52	Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
53	Low Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
54	Instrument Lights			One or more can be inoperative for daylight flights
55	Alternate Static	1	**1**	
56	Alternators	2	**2**	
57	Batteries	1	**1**	
58	Manifold Pressure Indicators	2	**2**	
59	Alternators Output indicators	2	**2**	
60	Alternators Inoperative Indicators	2	**1**	Can be inoperative provided that the alternator output indicator is operative and the flight has as destination the main base
61	Electric fuel pumps	2	**2**	
62	Tow Bar	1		May be missing provided that another safe procedure of towing the aeroplane exists and is acceptable by the commander

63	Fuel Strainer	1		May be missing providing that there is another procedure to check fuel in the aeroplane's fuel tanks and strainer for contamination
64	Fuel Drain Locations	7		One or more may be inoperative provided that there is another procedure to check the fuel in the aeroplane's fuel tanks and strainer for contamination
65	Wing Stall Stripes	2	**2**	
66	Auxiliary Vacuum Pump	1		May be inoperative provided: The flight is daylight VFR flight and There is a placard on the instrument panel warning the commander for the malfunction
67	Propellers de-icing	2		One or more may be inoperative for day VMC only, provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
68	Surface De-icing Systems-Wing Vertical / Horizontal Stabilizers	1		May be inoperative for day VMC only, provided the aeroplane is not operated t any time in visible moisture or precipitation, when the OAT is less than +5°C
69	Hydraulics Pump	2	**2**	

Minimum Equipment List (MEL)

Aeroplane Type: PA-23-250 Aztec				Aeroplane Registration: SX-BDL
Item	System	Installed	Required	Remarks & Exceptions
1	Anti-Collision & Strobe lights	3	**2**	Red anti-collision light may be inoperative provided all strobe lights are operative
2	Flight Deck Lighting			May be inoperative for daylight flights
3	Torch	1		Can be missing for daylight flights. For night flights spare batteries must be available
4	Navigation / Position lights			One may be inoperative for daylight flights
5	Landing Lights	1		May be inoperative for daylight flights
6	Magnetic Compass	1	**1**	
7	Clocks	1		May be inoperative for VFR flights
8	Altimeters	2	**1**	For VFR operations: Any in excess of one may be inoperative for day VMC only provided the operative altimeter is on the commander's side For IFR operations
9	Airspeed Indicators	1	**1**	
10	Vertical Speed Indicator	1	**1**	
11	Turn and Slip Indicators & Turn Coordinator	1		May be inoperative for VFR flights provided that the slip indicator is operative
12	Attitude Indicators	2	**1**	For VFR operations: Any in excess of one may be inoperative for day VMC only provided the operative altimeter is on the commander's side For IFR operations
13	Directional Gyro	1	**1**	
14	Pitot Heating System	1		May be inoperative for VFR day and VMC only provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
15	Auto Pilot	1		May be wholly or partially inoperative provided: a) No electrical or mechanical fault exists that will have an adverse effect on any flight control function, and b) Approach minima do not require their use
16	Windshield Heating	1		Same with item 14
17	Stall warning Vane	1	**1**	
18	Flight Crew Intercom	1		May be inoperative provided: Procedures are not dependent upon its use & Alternate procedures are

				established and used
19	Headsets And Microphones			The following combination is required for any kind of flight: (a)Two headsets (b)Two microphones (c)One headset and one microphone In case (a) at least one push to talk button must be operative
20	Main Door latches	2	**2**	
20b	Emergency Exit Latches	1	**1**	
21	First Aid Kit	1	**1**	
22	Hand Fire Extinguisher	1	**1**	Provided that the fire extinguisher is checked and the expiration date is written clearly
23	Crash Axe	1	**1**	
24	Emergency Locator Transmitter	1		May be inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first
25	Lifejackets			Any in excess of minimum required may be missing
26	Life Raft for Extended Over water Flights			
27	Audio Selector Panel	1	**1**	
28	Push to Transmit Switches	2		One may be inoperative in case that two headsets are in use by the crew members
29	Radio Communication Systems VHF for VFR flights	2	**1**	Any in excess of one, and not powered by an emergency bus, may be inoperative.
30	Frequency Transfer Switch	2	**1**	Provided that it belongs to the operative VHF
31	Frequency Selector Knob	1	**1**	Provided that it belongs to the operative VHF
32	Frequency Indication	1	**1**	Provided that it belongs to the operative VHF
33	SSR Transponder	1		May be inoperative provided agreement can be obtained from all ATC authorities
34	Radio Communication Systems VHF for IFR flights	2	**2**	Any in excess of two, and not powered by a emergency bus, may be inoperative
35	Frequency Transfer	2	**2**	
36	Frequency Selector	2	**2**	
37	Frequency Indication	2	**2**	
38	SSR Transponder	1	**1**	
39	VOR Navigation Receivers	2	**1**	Any in excess of one may be inoperative provided: Operational procedures, are not based only on VOR signals, and Both ADF and DME are operative
40	ADF Receiver	1		May be inoperative provided: One DME, two VORs, or alternative approved navigational equipment are operative, and Ops do not require their use
41	Marker Beacon	1		May be inoperative for IFR, provided approach procedures do not require marker fixes. May be

				inoperative for VFR
42	Distance Measuring Equipment (DME)	1		May be inoperative provided: a) One ADF, two VORs or alternative approved navigational equipment are operative, and b) Operational procedures do not require their use
43	ILS	1		May be inoperative for IFR operations, provided approach minima do not require their use. OR May be inoperative for VFR operations
44	Seat Belts and Harnesses	6		Inoperative seat belts are not occupied
45	Tachometers (RPM Indicators)	1	**1**	
46	Oil Temperature	1	**1**	
47	Oil Press Indicators	1	**1**	
48	Fuel Quantity Indicators	2	**1**	Is capable to indicate at least empty, full and half indications to corresponding tanks or The flight will start with full tanks, the duration is less than 3 hours
49	Carburetor Heat	1		Can be inoperative provided that the OAT during every phase the flight is more than +20°C and there is not present visible moisture and the OAT indicator is operative
50	Outside Air Temperature Indicators	1		Can be inoperative provided: The commander ensures that the OAT is more than +20°C and there is not present visible moisture The flight is day VFR / VMC
51	Vacuum Pumps	1	**1**	
52	Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
53	Low Vacuum Indicators	1		May be inoperative provided that the flight is day VFR and that the flight is to main base from another aerodrome
54	Instrument Lights			One or more can be inoperative for daylight flights
55	Alternate Static	1	**1**	
56	Alternators	2	**2**	
57	Batteries	1	**1**	
58	Manifold Pressure Indicators	2	**2**	
59	Alternators Output indicators	2	**2**	
60	Alternators Inoperative Indicators	2	**1**	Can be inoperative provided that the alternator output indicator is operative and the flight has as destination the main base
61	Electric fuel pumps	2	**2**	
62	Tow Bar	1		May be missing provided that another safe procedure of towing the aeroplane exists and is acceptable by the

				commander
63	Fuel Strainer	1		May be missing providing that there is another procedure to check fuel in the aeroplane's fuel tanks and strainer for contamination
64	Fuel Drain Locations	7		One or more may be inoperative provided that there is another procedure to check the fuel in the aeroplane's fuel tanks and strainer for contamination
65	Wing Stall Stripes	2	**2**	
66	Auxiliary Vacuum Pump	1		May be inoperative provided: The flight is daylight VFR flight and There is a placard on the instrument panel warning the commander for the malfunction
67	Propellers de-icing	2		One or more may be inoperative for day VMC only, provided the aeroplane is not operated at any time in visible moisture or precipitation, when the OAT is less than +5°C
68	Surface De-icing Systems-Wing Vertical / Horizontal Stabilizers	1		May be inoperative for day VMC only, provided the aeroplane is not operated t any time in visible moisture or precipitation, when the OAT is less than +5°C
69	Hydraulics Pump	1	**1**	

Training Routes & Areas

Global Air Services uses all unrestricted Greek airspace for flight training of pilot students.

Specifically, for various stages of training, the following areas are used:

IFR Advanced Training

IFR Training

VFR Advanced Training

VFR Training

Megara Airport
Alepochori Area
Psatha Area
Schinos Area
Asprokampos Area
Porto Germanos Area
Alyki Area
Akrefnio Area
Kopais Area (Ikaros)
Diaporii Area
Egina Area
Poros Area
Agistri Area

Also Including:

Mesologi Airfield
Syros Airport
Naxos Airport
Skyros Airport
Skopelos Airport
Hydra Area
Kea Area
Paros Airport

Also Including:

Milos Airport
Zakynthos Airport
Kefalonia Airport
Tanagra Airport
Kythira Airport
Santorini Airport
Samos Airport
Skiathos Airport
Mykonos Airport

Also Including:

Corfu Airport
Rhodes International Airport
Athens International Airport
Thessaloniki International Airport
Hania International Airport
Iraklio International Airport
Kos International Airport

More details about the exercises performed in the above areas are available in the Training Manual.

Performance & Flight Planning

All the required and complementary performance information applicable to the individual aeroplane is provided in the individual Pilot Operating Handbook (POH), in Section 5.

Proper training to all Flight Instructors and student pilots is provided with respect to all aeroplane performance information and with greater emphasis on the following:

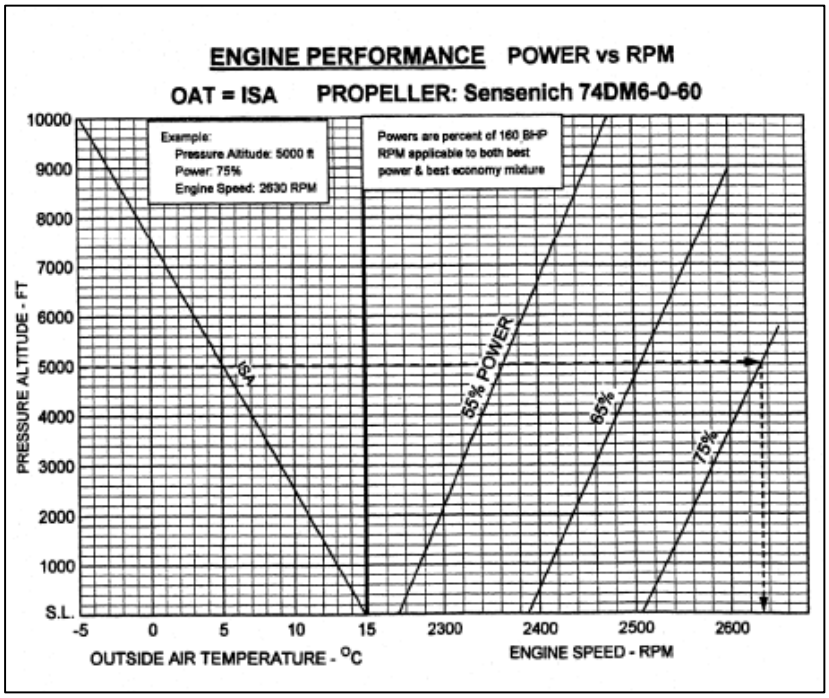
- Temperature Conversion
- Engine Performance
- Climb Performance
- Fuel, Time and Distance to Climb
- Fuel, Time and Distance to Descend
- Glide Performance
- Cruise Performance
- Range & Endurance
- Landing Distance

CAUTION

Prolonged operation at powers above 75% with a leaned mixture can result in engine damage. While establishing Best Economy Cruise Mixture, below 6,000 feet, care must be taken not to remain in the range above 75% power more than 15 seconds while leaning. Above 6,000 feet the engine is incapable of generating more than 75%.

The Flight Instructor will assist the student pilot in the early stages of his/her training, on the proper calculations for the appropriate Navigation Log and Load & Performance Log. Later on the student will be asked to complete the calculations under the supervision of his/hers Flight Instructor.

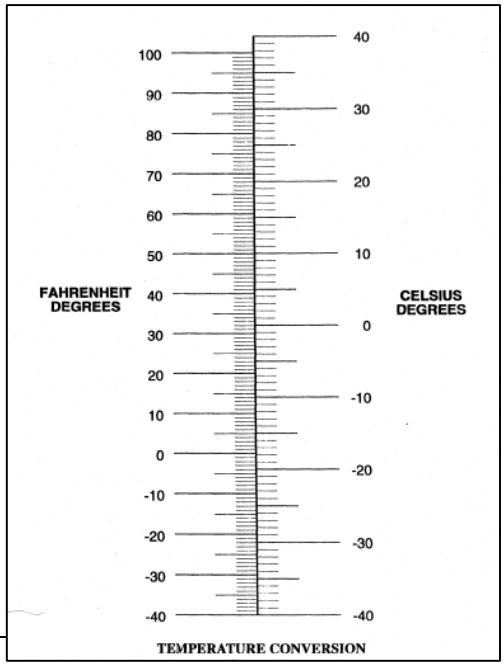
Detailed Performance Graphs for individual aeroplanes can be found in their respective Pilot Operating Handbook (POH), in Section 5.



Example of Engine Performance Graph for PA-28-161, found at Section 5 of the POH.

WARNING

Performance information derived by extrapolation beyond the limits shown on the charts should not be used for flight planning purposes.

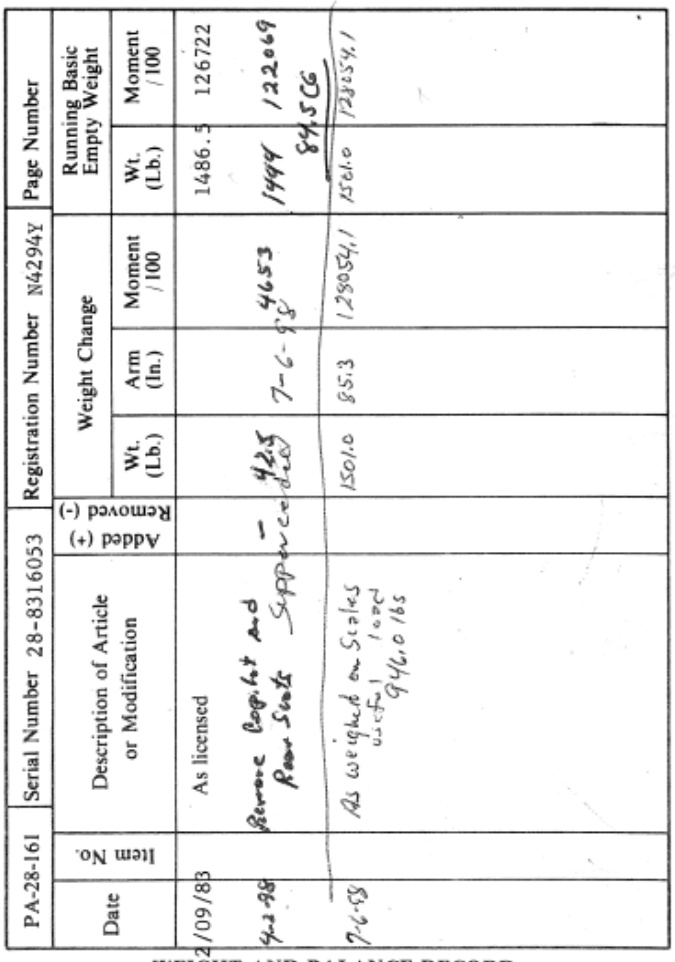


Weight and Balance

In order to achieve the designed performance and flying characteristics of each aeroplane, it must be flown with the weight and centre of gravity (C.G.) position within the approved operating range (envelope). Although the aeroplanes offer a flexibility of loading, they cannot be flown with maximum number of passengers, full fuel tanks and maximum baggage. With this loading flexibility comes responsibility.

The flight Instructor ensures that the aeroplane is properly loaded. In the advanced stages of training, when the student is calculating the loading envelope of the aeroplane, he/she is always under the direct supervision of the Flight Instructor.

The latest weight and balance calculation is always onboard the aeroplane. More details about the weight and balance for individual aeroplanes can be found in their respective Pilot Operating Handbook (POH), in Section 6.



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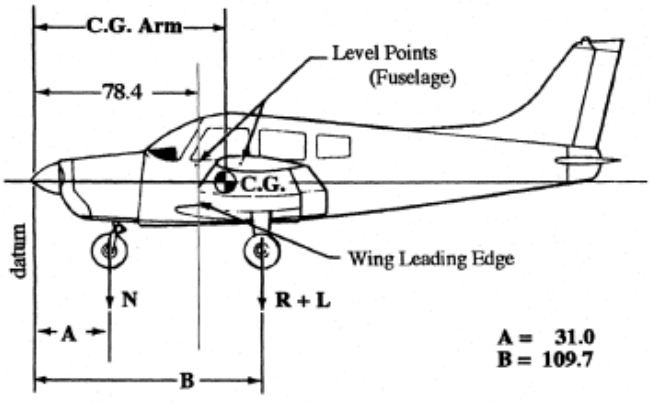
Item No.	Description of Article or Modification	Added (+)	Removed (-)	Weight Change Wt. (Lb.)	Weight Change Arm (In.)	Weight Change Moment /100	Running Basic Empty Weight Wt. (Lb.)	Running Basic Empty Weight Moment /100	Date
	As licensed						1486.5	126722	12/09/83
	Remove Cowl and Rear Seats		-	42.5	7-6-93	4653	1499	122069	4-2-98
	As weighed on Scales useful load 946.0 lbs			1501.0	85.3	129054.1	1501.0	129054.1	7-6-93

WEIGHT AND BALANCE RECORD

NOTE
It is the pilot's responsibility to be sure when the baggage is loaded that the aircraft C.G. falls within the allowable C.G. range. (See Weight and Balance Section.)

Scale Position and Symbol		Scale Reading	Tare	Net Weight
Nose Wheel	(N)			
Right Main Wheel	(R)			
Left Main Wheel	(L)			
Basic Empty Weight, (as Weighed)	(T)			

WEIGHING FORM



LEVELING DIAGRAM

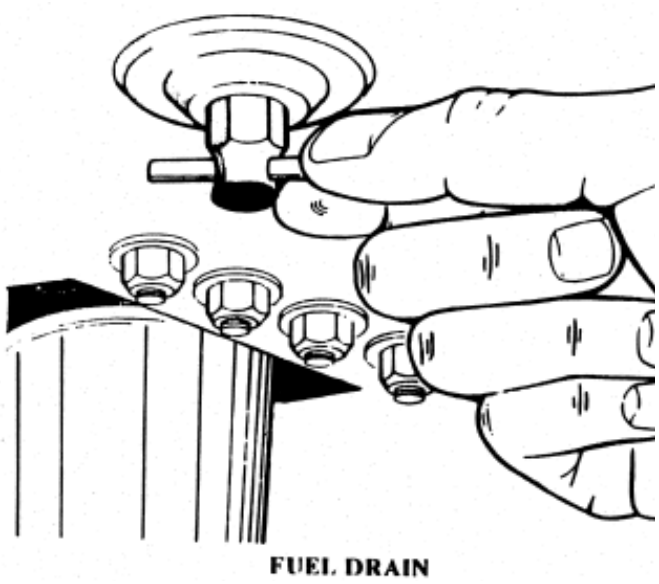
Example of Weighting Form, and Leveling Diagra
POH, as well as the actual current Weight and Balance Record found onboard the aeroplane.

Fuel & Oil Policy

Global Air Services personnel are properly trained to inspect the refuelling process. Under no circumstance will a student pilot left unattended during refuelling of an aeroplane. The fuel company's employee will always be present during refuelling as well.

It is the responsibility of the Pilot-in-Command of the aeroplane to ensure that refuelling is properly completed, if no flight instructor is responsible of the flight. Student pilots, flying solo training flights, refuelling in airports other than base airport is not recommended, but in case it is necessary they will do so only with the direct authorization of their flight instructor.

Fuel drain process will be performed according to the POH of the aeroplane, following the appropriate precautions.



FUEL DRAIN

CAUTIONS

When draining any amount of fuel, care should be taken to ensure that no fire hazard exists before starting the engine.

After draining, each quick drain should be checked to make sure it has closed completely and is not leaking.

It is recommended that all flights commence with full tanks. In case that it is not possible, then no flight will commence if the required trip fuel, with the appropriate reserve fuel is not available. When the base airport does not have refuelling capabilities, the airport of Ikaros, at Kopais area, will be the refuelling hub of all flights. Same restrictions, and responsibilities apply there. Fuel volume in the tanks, are always checked visually by the flight instructor.

Before each flight, the flight instructor will check the oil quantity at the aeroplane's engine. Oil capacity of the engines is 8 quarts each, and according to the aeroplane POH, the minimum safe quantity is 2 quarts. No flight is permitted to commence if the oil quantity is less than 5½ quarts.

Necessary quantity of fuel:

- ✓ **Trip Fuel**: The amount of fuel necessary to complete the flight.
- ✓ **Alternate Fuel**: The amount of fuel necessary to complete the IFR flight, considering a miss approach and redirect to the alternate airport.
- ✓ **Reserve Fuel**: The amount of fuel necessary to fly for 45 minutes in a normal holding speed at 1500ft.

Global Air Services aeroplanes are **ONLY** using **AVGAS fuel Grade 100LL**.

Weather Limitations

For VFR flights, according to Global Air Services, safe altitudes are considered the following:

- In flat areas 1000ft above the highest obstacle along the route within 5NM.
- In mountainous areas 2000ft above the highest obstacle along the route within 5NM. Mountainous area is considered an area that the highest obstacle is at 5000ft.

Global Air Services aircrafts used for flight training are equipped with suitable instruments and with navigation equipments appropriate for IFR flights. The IFR flights are not permitted into known icing condition. Flights are permitted with respect to reasonable weather conditions of safe flight. Flight Instructors are responsible for staying within their personal limitations and to verify their student's limitations.

For VFR flights the weather limits that are described below have to be followed:

Airspace	Visibility	Distance from Cloud
Outside ATZ's or TMA's Above 3000ft AMSL or above 1500 ft above terrain, whichever is higher	8 Km	1000 ft vertical and 1500 m horizontal from cloud
Inside ATZ's or TMA's At and below 3000ft AMSL or 1000 ft above terrain, whichever is higher	5 km	Clear of cloud and in sight of the surface

For training flights the weather limits are described below:

Flight Training Limits	Restriction of No. of Aircrafts in case of poor weather	Visibility	Sky Condition		Wind	
			Distance from Cloud	Horizon	X-wind	H-wind
Exercise 3 – 13	4	10 km	**Clear of clouds**	**Visible**	7 Kts	10 Kts
Exercise 14 1st solo	1	10 km	**Clear of clouds**	**Visible**	5 Kts	10 Kts
Dual x-country	4	5 Km	✓ 1000 ft Vertical ✓ 1500 m Horizontal ✓ In sight of the surface	N/A	17 Kts	25 Kts
SOLO x-country	2	8 Km	✓ 2000 ft Vertical ✓ 3000 m Horizontal ✓ In sight of the surface	**Visible**	7 Kts	15 Kts
IR exercise 19-26	4	5 Km	✓ 1000 ft Vertical ✓ 1500 m Horizontal	n/a	20 Kts	30 Kts
IR exercise 27-39	4	n/a	n/a	n/a	20 Kts	30 Kts
SPICUS	4	n/a	n/a	n/a	20 Kts	30 Kts
Advanced IR (FNPT II)	**N/A**	**Low**	**Into Clouds**	**Not Visible**	25 Kts	45 Kts

Single Engine Standard Operating Procedures

CONTENTS

General Notes:

- **Carburetor Heat** Usage For all exercises in this manual:
  - i. Below 2000 RPM – ON
  - ii. Above 2000 RPM – OFF

1. POSITIVE EXCHANGE OF FLIGHT CONTROLS

Objective: To provide guidance on procedures from the transfer of airplane flight controls between pilots during flight with emphasis on ensuring both crewmembers who is flying the plane at all times.

When the Pilot Flying (PF) wishes the Pilot Monitoring (PM) to take control of the airplane refer to the following dialog:

PF: You have the flight controls
PM: I have the flight controls
PF: You have the flight controls

The PF will check that the PM has the flight controls.

When the Pilot Monitoring (PM) wishes to take control of the aircraft, refer to the following dialog:

PM: I have the flight controls
PF: You have the flight controls
PM: I have the flight controls

The PF will check that the PM has the flight controls.

When the Pilot Monitoring (PM) wishes the Pilot Flying (PF) to take control of the airplane refer to the following dialog:

PM: You have the flight controls
PF: I have the flight controls
PM: You have the flight controls

The PM will check that the PF has the flight controls.

Note that for this manual PF=Student and PM=Instructor

2. INSTRUMENT COCKPIT CHECK

Objective: To ensure proper operation of all instruments, avionics and navigation equipment as required by applicable JAR prior to flight.

<u>During Before Taxi Checklist Flight instrument check Perform the following actions:</u>

- Obtain current ATIS or Aerodrome info from ATC
- Magnetic compass :
    - Case is full of fluid
    - Fluid is clear
    - Indicates known Heading
    - Deviation Card intact and Legible
- Clock – operating properly U.T.C. set
- Airspeed indicator – indicates Zero
- Attitude Indicator
    - Stabilized within 5 minutes
    - No unusual noises
    - Align miniature a/c with artificial horizon
- Altimeter
    - Current QNH set
    - Indication within 75 feet from airport elevation
- Vertical Speed Indicator
    - Reads zero (or note variance)

- Directional Gyro
    - Align with magnetic compass
    - No unusual noises
- Turn Coordinator
    - Ball at the inclinometer's lowest point
    - Airplane is level
    - Inclinometer full of fluid
    - No red flag showing in the window
- Marker Beacon Lights Test
- GPS
    - Set current Altimeter
    - Check Database currency
    - Check Reference Aerodrome and position
- COM 1 – Set to Ground Control
- COM 1 STBY - Set to Tower
- COM 2 – Set to Departure Control
- COM 2 STBY – Set to Approach Control at Destination
- NAV 1, NAV 2 – Perform VOT if available.
- ADF
    - Tune and identify local beacon
    - Check for proper indications
- NAV 1, NAV 2, ADF – Set as required for the flight.

During Taxi Checklist Flight instrument check Perform the following actions:

- Magnetic Compass – Turns freely
- Attitude Indicator – Max 5 deg. Of bank
- Heading Indicator – Turns freely
- Turn Coordinator – Airplane banks in the direction of the turn and ball in the opposite.

3. PRE MANOEUVRE CHECKLIST

It is mandatory for all flight crews operating on a Global Air Services airplane to perform this checklist prior to the start of any manoeuvre.

Objective: To ensure proper aircraft configuration prior to performing any manoeuvres.

- **Electric Fuel pump - ON**
- Fuel Selector – As Required (Fullest Tank is preferable)
- Mixture Rich below 5000 FT
- Landing Lights – ON
- Battery Master and Alternator – ON
- Magnetos – BOTH
- Seat Belts – Secured
- Position and intention report – Complete

4. CLEARING TURNS

It is mandatory for all flight crews operating on a Global Air Services airplane to perform this item prior to the start of any manoeuvre.

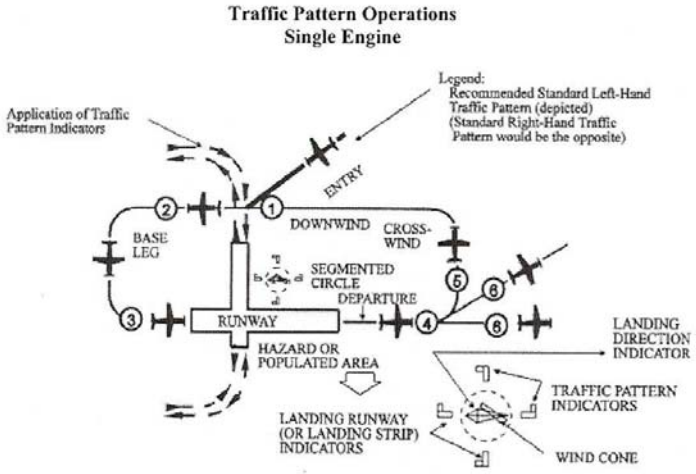
Objective: To determine that the airspace surrounding the airplane is clear of other traffic before starting any manoeuvre.

- Gently lower the wing on the side of the first intended turn and scan the area previously blocked by the wing.
- Perform two medium bank 90-degree turns in opposite direction.
- If any traffic exists take avoidance measures
- Rollout wings level and start the manoeuvre
- Turning manoeuvres should be made in the direction of the last cleared area

5. TRAFFIC PATTERNS

Objective: To ensure application of proper procedures necessary for safe and efficient operations at controlled and non-controlled airports.
Note: Underlined items apply to non towered airports only. For Controlled airports follow ATC instructions regarding entry and position reports.

- Determine the active runway
- Advise your position and intentions on the Tower or CTAF (119,7)
- Maneuver the airplane for a 45-degree ground track toward the midpoint of the downwind leg.
- Identify the position of any other aircraft in the traffic pattern or vicinity of the airport.
- Pattern altitude and airspeed must be established not less than 2 miles prior to reaching the downwind leg.
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-ARC 4 nm south established on a 45 deg entry for runway 09 Ikaros")
- Verify that the Before landing checklist is completed.
- Reduce power to maintain 90 kts
- Turn the airplane onto the downwind leg approximately ½ mile from the runway.
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-ARC midfield downwind for runway 09 Ikaros")
- Abeam the Numbers
    - Reduce power to approx 1700 RPM
    - Flaps 10 degrees
    - Trim for shallow descent
- Descent to 800 feet before turning base leg at an appropriate point (45deg) from the landing runway.
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-ARC turning right base for runway 09 Ikaros")
- On base leg
    - Maintain 80 kts
    - Flaps 25
    - Clear the Final
- Visually clear the final approach and commence your turn to final so as to roll out with the a/c aligned with the runway and at an altitude no less than 500 feet AGL
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-ARC turning final for runway 09 Ikaros")
- On final leg
    - Maintain 70-75 kts
    - Flaps 40
- The approach must be stabilized by no lower than 300 feet AGL
- Execute the appropriate landing or go-around procedure



6. NORMAL AND CROSSWIND TAKE OFF

Objective: To develop the pilot's ability to safely accomplish a takeoff and departure in normal and crosswind conditions.

- Complete departure briefing
- Communications
    - At an uncontrolled airport, broadcast intentions at CTAF
    - At a controlled airport, obtain clearance from the Control Tower prior to taxi on to the runway
- Complete the Before takeoff Checklist prior to entering the runway
- Check Final approach for traffic
- Taxi the airplane into position, centered on the runway
- Position the flight controls for existing wind conditions
- Apply full power and announce "Engine gauges green, Power available, Airspeed alive"
- Accelerate to Vr while maintaining directional control with the rudder pedals. As airspeed increases, slowly reduce flight control inputs to avoid over controlling.
- At Vr, smoothly apply back pressure to achieve a positive climb attitude
- Accelerate to Vy
- On climb out at Vy, maintain ground track along the runway and its extended centerline with use of rudder and ailerons as necessary
- Maintain Vy until a minimum safe altitude is achieved (1000' AGL), then accelerate to cruise climb if desired and set climb power
- Complete climb checklist above 1000' AGL

7. SHORT FIELD TAKEOFF

Objective: To develop the pilot's ability to safely and accurately obtain maximum performance from the airplane while executing a short field takeoff and safely clearing all obstacles in the departure path.

- Complete the departure briefing set Flaps 25
- Communications
    - At an uncontrolled airport, broadcast intentions on CTAF
    - At a controlled airport, obtain taxi clearance from the control tower prior to taxi onto the runway
- Complete Before Takeoff Checklist prior to entering the runway
- Check Final path for traffic
- Position the airplane for maximum utilization of available runway
- Line up with the centreline and hold position

- Position the flight controls for the existing wind conditions
- Hold the brakes and apply smoothly takeoff power
- Check engine instruments for proper indications and announce "Engine gauges green"
- Check RPM for static RPM and announce "Power is available" then release the brakes
- As the airplane accelerates, maintain the center line with the rudders , check airspeed and announce "airspeed alive" finally adjust the ailerons for the increased speed
- Accelerate to Vr and pitch for Vx
- Once airborne apply the necessary crab angle to maintain the airplane's ground track along the runway extended centerline
- Once the initial obstacles are cleared (airdrome facilities, fence, trees, etc) pitch for Vy and during acceleration retract the flaps in stages
- Maintain Vy until at least 1000' AGL then proceed with cruise climb if desired
- Complete climb checklist above 1000' AGL

8. SOFT FIELD TAKEOFF

Objective: To develop the pilot's ability to safely and accurately obtain maximum performance from the airplane when taking off from other than a smooth, hard surface runway.

- Complete Departure Briefing and set Flaps 25
- Communications
    - At an uncontrolled airport, broadcast intentions on CTAF
    - At a controlled airport, obtain taxi clearance from the control tower prior to taxi onto the runway
- Complete Before Takeoff Checklist prior to entering the runway
- Check Final path for traffic
- If no traffic is observed on final, taxi into the runway (maintain full back pressure) with a speed consistent with safety and align the nose wheel up with the runway centerline, apply full nose up elevator input and advance throttle smoothly to takeoff power
- Apply rudder as necessary to maintain directional control (usually right!!!)
- Check engine gauges and airspeed indicator and announce "Engine gauges green, power available, airspeed alive"
- Maintain full back pressure until the nose wheel comes off the runway. Adjust back pressure to maintain the nose wheel clear off the runway without over rotating until airplane lifts off
- Lift off at the lowest possible airspeed and gently lower the pitch attitude as necessary to remain in ground effect while the airplane accelerates to Vx
- If obstacles are present, maintain Vx until clear
- Once clear of obstacles pitch for Vy and during acceleration retract the flaps in stages
- Maintain Vy until at least 1000' AGL then proceed with cruise climb if desired
- Complete climb checklist above 1000' AGL

9. NORMAL AND CROSSWIND LANDING

Objective: To develop the pilot's ability to safely accomplish an approach, landing and rollout in normal and crosswind conditions.

- Complete the appropriate traffic pattern
- Established on final set the **flaps to 40 degrees**
- Adjust heading to achieve the proper crab angle if necessary
- Coordinate pitch and power to obtain 75 kts and the appropriate descent angle
- Trim to maintain speed and relieve control pressure
- Approach must be stabilized no lower than 400' AGL
- Aim for a point to allow touchdown on the first third of the runway

- At the appropriate height (usually 10' above the runway), simultaneously reduce the power and begin to round out by gently increasing backpressure on the yoke
- In case of crosswind conditions use ailerons into the wind to correct for drift and opposite rudder to keep the airplane's longitudinal axis aligned with the runway centerline
- Smoothly apply backpressure to dissipate airspeed without increasing altitude, allowing the airplane to touchdown at the minimum possible airspeed (close to stall)
- Use of proper crosswind technique will allow to touchdown on the upwind main gear first, followed by the downwind main gear and finally the nose gear
- As the airplane decelerates increase aileron into the wind and maintain directional control with the rudder as necessary to remain on the centerline
- Slow the airplane to normal taxi speed before taxiing clear of the runway
- Complete the after landing checklist when completely clear of the runway

10. SHORT FIELD LANDING

Objective: To develop the pilot's ability to safely accomplish a maximum performance approach and landing

- While on Downwind, select a touchdown point
- Complete the appropriate traffic pattern
- Established on final set **flaps 40**
- Adjust heading to achieve the proper crab angle
- Coordinate pitch and power to obtain 68 kts
- Trim to maintain speed and relieve control pressures
- Aim for a point approximately 200' before your previously selected touch down point
- Approach must be stabilized not lower than 300' AGL
- At the appropriate height (**NOT MORE THAN 10'AGL)**, simultaneously reduce power and begin to round out by gently increasing backpressure on the yoke
- In case of a crosswind conditions use aileron into the wind to correct for the drift and opposite rudder to keep the airplane's longitudinal axis aligned with the runway centerline
- Smoothly apply backpressure to dissipate airspeed without increasing altitude, allowing the airplane to touchdown at the minimum possible airspeed
- Touchdown at or within 100' beyond your selected point
- Once all three wheels have touchdown, retract the flaps and smoothly apply brakes
- Use backpressure on the yoke to aid in aerodynamic braking
- As the airplane decelerates increase aileron into the wind and maintain directional control with the rudder as necessary to remain on the centerline
- Slow the airplane to normal taxi speed before exiting the runway
- Complete the After landing checklist upon exiting the runway

11. SOFT FIELD LANDING

Objective: To develop the pilot's ability to safely accomplish an approach, landing rollout to a smooth surface runway.

- Complete the appropriate traffic pattern
- Established on final set **flaps 40**
- Adjust heading to achieve the proper crab angle
- Coordinate pitch and power to obtain 70 kts and the appropriate descend angle
- Trim to maintain speed and relieve control pressures
- Aim for a point in the beginning of the runway allowing the touchdown to be accomplished within the first third of it
- Approach must be stabilized not lower than 300' AGL

- At the appropriate height above the runway **(10' AGL)** begin your flare by increasing backpressure enough to hold the airplane just off the runway while adding some power
- In case of a crosswind conditions use aileron into the wind to correct for the drift and opposite rudder to keep the airplane's longitudinal axis aligned with the runway centerline
- Touch down on the main gear at minimum controllable airspeed in a slightly nose high attitude with the engine carrying a small amount of power
- Maintain the nose wheel off the runway by increasing backpressure as the airplane decelerates. Use rudder input to maintain directional control and avoid using the brakes
- Slow the airplane to normal taxi speed before exiting the runway
- Complete the After landing checklist upon exiting the runway

12. FORWARD SLIP TO A LANDING

Objective: To develop the pilot's ability to increase the airplane rate of descent during the final approach segment, without increasing airspeed

- Complete the appropriate traffic pattern
- Established on final, prior to setting the flaps to 40, reduce power to idle
- One wing is lowered using aileron (preferably the upwind)
- Simultaneously yaw the airplane in the opposite direction with rudder as necessary to maintain the airplane ground track along the extended runway centerline
- Adjust the pitch to maintain a minimum of 65 kts (be aware the airspeed indicator is not accurate during the maneuver)
- After descending to a normal glide path altitude realign the airplane longitudinal axis with the runway extended centerline and apply crosswind correction (crab) if needed
- Resume normal approach and set flaps to 40
- Approach must be stabilized not lower than 300' AGL

THIS MANOEUVRE IS PROHIBITED FOR PHASE 1 AND 2 SOLO FLIGHTS

13. POWER OFF 180 APPROACH

Objective: To develop the pilot's judgment in estimating distances and glide ratios.

- Position the airplane on downwind leg, parallel to landing runway, and not more than 1000' AGL
- Maintain normal traffic pattern procedures
- Select an appropriate touchdown point considering obstacles in final approach
- Abeam the touchdown point, close the throttle and establish the appropriate glide speed (check POH)
- Trim the airplane as necessary to maintain airspeed
- Planning the airplane glide path should include taking into consideration wind speed and direction
- The base to final turn should be planned and accomplished so that upon rolling out of the turn the airplane will be aligned with the runway centerline
- At the point where landing is assured, the flaps should be progressively lowered as necessary and the pitch attitude adjusted so the airplane will touchdown at or within 200' beyond the specified touchdown point
- Slow the airplane to normal taxi speed before exiting the runway
- Complete the After landing checklist upon exiting the runway

14. GO AROUND

Objective: To develop the pilot's ability to safely perform a go-around/rejected landing procedure

- Complete traffic Pattern Operations
- Upon deciding to execute a go around procedure, immediately but smoothly apply maximum takeoff power Establish a pitch attitude to maintain Vx
- Retract flaps to 25^0 and maintain Vx
- When a positive rate of climb is established retract the flaps to 10
- Announce intentions on CT AF or tower (ex: "Ikaros traffic Cessna xyz is going around runway 09, Ikaros")
- Maintain runway centerline alignment, unless conflicting traffic exists. If another aircraft is on the runway or taking off, alter course to the non-pattern side (or as directed by ATC if at an airport with a control tower), and keep the departing aircraft in sight, manoeuvring to remain clear
- Once all obstacles are cleared, accelerate to Vy, Retract the remaining 10^0 of flaps
- Maintain Vy until 1000' AGL then transition to cruise climb airspeed if desired
- Turn crosswind no earlier than the departure end of the runway
- Re-establish a normal traffic pattern or as directed by ATC

15. EMERGENCY APPROACH AND LANDING

Objective: To develop the pilot's accuracy, judgment and planning procedures in how to increase the chances of a safe landing in the event of engine failure.

- The examiner or instructor will simulate an engine failure by retarding the throttle to idle
- Maintain aircraft control
- Select flaps up
- Adjust pitch to achieve best glide speed
- Trim to relieve control pressures
- Select a suitable field for landing within gliding distance considering wind, terrain and obstacles
- Turn towards intended landing area
- Maintain a glide path that allows a simulated landing on the selected area
- Above 1500 AGL perform the memory items for the "Engine Failure in Flight" Checklist, then initiate "Power off Landing" Checklist
- Below 1500 AGL perform the memory items for the "Engine Failure in Flight" Checklist
- Below 1000 AGL simulate securing the engine (without the "Power off Landing" checklist)
- **Concentrate on landing the airplane**
- Prepare for landing (if over an airport) or go-around as specified by the examiner

Note: Simulated engine failure must be discontinued no lower than 500' AGL and a climb to a safe altitude shall be executed immediately.

16. SLOW FLIGHT (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize changes in airplane flight characteristics and control effectiveness at low airspeed.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Select a reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce throttle to 1500 rpm and maintain altitude as airspeed decreases using coordinated flight controls
- As airspeed approaches 10 kts above stall speed, adjust power for level flight (approximately 1800 to 2000 rpm)

- Trim the airplane to maintain an airspeed at which any further increase in angle of attack, increase in load factor or reduction in power, would result in an immediate stall, (stall warning horn should remain beeping at all times)
- Adjust power to maintain altitude and pitch to maintain airspeed
- Accomplish coordinated straight and level flight, turns, climbs or descends as specified by the examiner
- Divide attention between airplane control, outside and inside references
- Maintain altitude within:
    - ± 100' (private)
    - ± 50' (commercial)
- 13. Maintain airspeed within:
    - + 10/-0 kts (private)
    - + 5/-0 kts (commercial)
- Maintain heading within: ±10°

Recovery Procedure:
- Apply full power, maintain altitude and heading as airspeed increases
- After reaching cruise airspeed (90 kts.), reduce to cruise power setting (approximately 2300 rpm)
- Perform **"Cruise Checklist"**

17. SLOW FLIGHT (LANDING CONFIGURATION)

Objective: To develop the pilot's ability to recognize changes in airplane flight characteristics and control effectiveness at low airspeeds in the landing configuration.
- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce throttle to 1500 rpm, as airspeed decreases to flap extended speed, maintain altitude and coordinated flight controls and select flaps 10°
- Below 75 kts, select flaps 25° and 40° respectively
- As airspeed approaches 10 kts. Above stall speed, adjust power for level flight (approximately 1800 to 2000 rpm)
- Trim the airplane to maintain airspeed at which any further increase in angle of attack, increase in load factor or reduction in power, would result in an immediate stall, (stall warning horn should remain beeping at all times)
- Accomplish coordinated straight and level flight, turns, climbs or descends as specified by the examiner
- Divide attention between airplane control, outside and inside references
- Maintain altitude within:
    - ± 100' (private)
    - ± 50' (commercial)
- Maintain airspeed within:
    - + 10/-0 kts. (private)
    - + 5/-0 kts. (commercial)
- Maintain heading within: ±IO°

Recovery Procedure:
- Apply full power; maintain altitude and heading as airspeed increases
- Reduce flaps to 25°
- At approximately Vx and with positive rate of climb, reduce flaps to 10°
- At Vy or close to Vy with positive rate of climb, select flaps up
- After reaching cruise airspeed (90 kts.), reduce to cruise power setting (approximately 2300 rpm)
- Complete "Cruise Checklist"

18. POWER OFF STALL (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm, and maintain altitude as airspeed decreases
- At 65 kts, reduce power to idle
- Stabilize a descent maintaining 60 kts.
- Power off glide for approximately 3 to 5 seconds
- Transition to a pitch attitude that will induce the stall in straight flight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private: After the stall occurs
    - Commercial: As the stall occurs

Recovery Procedure:

- Reduce the angle of attack just enough to allow the wing to regain lift (for private pilot applicants the nose should be lowered slightly below the horizon. For commercial pilots, the nose should be lowered just enough to allow recovery with the minimum lost in altitude)
- Apply full power and level the wings to return to straight and level flight attitude with a minimum loss of altitude
- Keep the airplane coordinated at all times
- After reaching cruise airspeed (approximately 90 kts.), reduce to cruise power setting (roughly 2300 rpm)
- Perform «Cruise Checklist»

19. POWER OFF STALL (LANDING CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm, and maintain altitude as airspeed decreases
- Select flaps 10^0
- Below 75 kts, select flaps 25^0 and 40° respectively
- At 60 kts, reduce power to idle
- Stabilize a descent maintaining 60 kts.
- Power off glide for approximately 3 to 5 seconds
- Transition to a pitch attitude that will induce the stall in straight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private:After the stall occurs
    - Commercial: As the stall occurs

Recovery Procedure:

- Reduce the angle of attack just enough to allow the wing to regain lift (for private pilot applicants the nose should be lowered slightly below the horizon. For commercial pilots, the nose should be lowered just enough to allow recovery with the minimum lost in altitude)
- Apply full power and level the wings to return to straight and level flight attitude with a minimum loss of altitude

- Keep the airplane coordinated at all times
- Retract flaps to 25^0 immediately
- At approximately Vx with a positive rate of climb , reduce flaps to 10
- At Vy or close to Vy with a positive rate of climb select flaps up
- After reaching cruise airspeed (approximately 90kts.), reduce to cruise power setting (roughly 2300 rpm)
- Perform «Cruise Checklist»

20. POWER ON STALL (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point on the ground
- Stabilize the airplane maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm
- Increase pitch as necessary to maintain altitude as airspeed decreases
- Upon approaching rotation speed, smoothly add full power
- Transition to a pitch attitude that will induce the stall in straight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private:<u>After</u> the stall occurs
    - Commercial: <u>As</u> the stall occurs

<u>Recovery Procedure</u>:

- Reduce the angle of attack and level the wings to return to straight and level flight with a minimum loss of altitude
- After reaching cruise airspeed (approximately 90 kts.), reduce to cruise power setting (roughly 2300 rpm)
- Perform «Cruise Checklist»

21. POWER ON STALL (TAKE OFF CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete **«Pre-maneuver Checklist»**
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm and maintain altitude as airspeed decreases, select flaps to 10°
- Upon reaching rotation speed, smoothly add full power
- Transition to a pitch attitude that will induce the stall in straight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private: <u>After</u> the stall occurs
    - Commercial: <u>As</u> the stall occurs

<u>Recovery Procedure</u>:

- Reduce the angle of attack and level the wings to return to straight and level flight with a minimum loss of altitude
- Reaching Vy (74 kts.) retract flaps
- After reaching cruise airspeed (approximately 90 kts.), reduce to cruise power setting (roughly 2300 rpm)
- Perform **«Cruise Checklist»**

<u>NOTE: This manoeuvre should not be initiated below 4000 feet AGL</u>

22. CROSS CONTROL STALL (DEMO ONLY)

Objective: To show the effect of improper control techniques and to emphasize the importance of using coordinated control pressures whenever making turns.

1. Select an altitude that allows recovery no lower than 1500' AGL
2. Complete «Pre-maneuver Checklist»
3. Complete clearing tums
4. Select a prominent reference point
5. Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
6. Reduce power to 1500 rpm, and maintain altitude as airspeed decreases
7. At 65 kts, reduce power to idle
8. Stabilize a descent maintaining 65 kts power off glide
9. Once established in the descend, bank 30° in either direction, simulating a base-to-final turn
10. Established in the turn, smoothly apply full rudder pressure in the direction of the turn. Maintain the bank angle by applying full opposite aileron pressure. As you do so, increase full back pressure on the yoke to keep the nose from dropping
11. Announce the first aerodynamic indication of the imminent stall (i.e. warning horn and/or buffeting)
12. Recover promptly at the first indication of a stall

Recovery Procedure:

- Reduce the angle of attack while simultaneously relieving control pressures
- Once the airplane is stabilized, apply full power and return to straight and level flight with the minimum loss in altitude
- Keep the airplane coordinated during recovery
- After reaching cruise speed (approximately 90 kts) reduce throttle to cruise power setting (roughly 2300 rpm)
- Perform «Cruise Checklist»

23. ELEVATOR TRIM STALL

Objective: To show the importance of making smooth power applications, overcoming strong trim forces and maintaining positive control of the airplane to hold safe flight attitudes, and using proper and timely trim techniques.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm, and maintain altitude as airspeed decreases
- Select flaps 10°
- Below 75 kts, select flaps 25° and 40° respectively
- At 60 kts, reduce power to idle
- Stabilize a descent maintaining 60 kts.
- Power off glide and trim full nose up holding the airplane's nose down
- Smoothly apply full throttle and allow the airplane nose to pitch up above the normal climbing attitude
- Announce the first indication of an imminent stall (i.e. warning horn and/or buffeting)
- Recover promptly at the first indication of a stall

Recovery Procedure:

- Promptly lower the nose while applying rudder pressure and aileron inputs as necessary. Return the airplane to a normal climb attitude of Vx
- While holding the airplane in this attitude, adjust trim to relieve the control pressure
- Retract flaps to 10° and accelerate to Vy
- At Vy select flaps up
- Return to straight-and-Ievel flight
- After reaching cruise speed (approximately 90 kts), reduce throttle to cruise power setting (roughly 2300 rpm)

- Perform «Cruise Checklist»

NOTE: This manoeuvre should not be initiated below 4000 feet AGL

24. ACCELERATED STALLS (DEMO ONLY)

Objective: To show the effect of excessive manoeuvring loads and develops the ability to recognize, and take prompt, effective recovery action.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce speed as to maintain 10 kts below Va (manoeuvring speed)
- Visually verify the area in the direction of the turn is still clear
- As the airplane is trimmed for straight and level flight, smoothly roll into a coordinated turn, maintaining a bank of 45°
- Established in the turn, smoothly apply back-elevator pressure until a definite stall occurs
- Announce the first aerodynamic indication of the imminent stall (i.e. warning horn and/or buffeting)
- Recover promptly at the first indication of a stall

Recovery Procedure:

- Reduce the angle of attack while simultaneously applying full power
- Once the airplane is stabilized return to straight and level flight with the minimum loss in altitude
- Maintain the airplane coordinated at all times
- After reaching cruise speed (approximately 90 kts) reduce throttle to cruise power setting (roughly 2300 rpm)
- Perform «Cruise Checklist»

NOTE: This maneuver should not be initiated below 3000 feet AGL

25. SECONDARY STALL (DEMO ONLY)

Objective: To show the importance of applying precise and accurate stall recovery techniques so as to allow the airplane to regain a safe flying speed before attempting to return to straight and level flight.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete **«Pre-maneuver Checklist»**
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Reduce power to 1500 rpm, and maintain altitude as airspeed decreases
- Select flaps 10°
- Below 75 kts, select flaps 25° and 40° respectively
- At 60 kts, reduce power to idle
- Stabilize a descent maintaining 60 kts. Power off glide for approximately 3 to 5 seconds
- Transition to a pitch attitude that will induce the stall in straight
- Maintain the airplane coordinated at all times
- As the airplane stalls maintain and/or increase back elevator pressure as necessary to induce a secondary stall
- Recover promptly at the first indication of a secondary stall

Recovery Procedure:

- Simultaneously reduce the angle of attack (just enough to allow the wing to regain lift) and apply full power

- Level the wings to return to straight and level flight attitude with a minimum loss of altitude
- Maintain the airplane coordinated at all times
- Retract flaps to 25° immediately
- At approximately Vx, reduce flaps to 10°
- At Vy select flaps up
- After reaching cruise airspeed (approximately 90 kts.), reduce to cruise power setting (roughly 2300 rpm)
- Perform **"Cruise Checklist"**

26. S-TURNS

Objective: To develop the pilot's ability to maneuver the airplane over a predetermined ground path, compensate for wind drift during turns and divide attention outside and inside the airplane.

- Select and altitude between 800' to 1000' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Ensure that there is an adequate emergency landing area within glide range
- Determine the wind direction
- Select a road or other straight reference line running approximately perpendicular to the wind
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts.)
- Enter the maneuver downwind and perpendicular to the reference line
- As you cross the reference line initiate a constant radius left turn. Modify the bank and crab angle as necessary to compensate for wind drift
- At the completion of the turn the aircraft will be over and perpendicular to the reference line with wings level Immediately after completion of the first him, an identical turn is begun on the upwind side of the reference line in the opposite direction
- Bank angle (not exceeding 45°) should be adjusted as necessary throughout the maneuver to achieve two complete semicircles of equal radius
- Exit the maneuver on the entry heading, Climb to a safe altitude as necessary Complete "Cruise Checklist"

27. TURNS AROUND A POINT

Objective: To develop the pilot's ability to maneuver the airplane over a predetermined ground path, compensate for wind drift during turns and divide attention outside and inside the airplane.

- Select and altitude between 800' to 1000' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Ensure that there is an adequate emergency landing area within gliding distance
- Determine the wind direction
- Select a small and prominent reference point
- Stabilize the airplane by maintaining the selected heading, altitude and airspeed (90 kts.)
- Enter the maneuver downwind
- Start a roll to the left when the aircraft is ½ mile from the reference point
- Adjust the bank and crab angle as necessary to correct for the effect of wind so as to maintain a constant radius from the selected reference point
- Complete at least two turns
- Exit at the entry point on downwind Climb to a safe altitude as necessary
- Complete "Cruise Checklist"

28. EIGHTS ON PYLONS

Objective: To develop the pilot's ability to maneuver the airplane accurately while dividing attention between the flight path and the selected reference points on the ground.

- Determine the correct pivotal altitude at which to enter the maneuver by the following formula: $(KTAS)^2/11.3$
- Ensure availability of an adequate landing area within gliding distance
- Select two, small but prominent, ground reference points (pylons) aligned perpendicular to the wind direction, and far enough apart to allow 3 to 5 seconds of straight and level flight between turns
- Complete **«Pre-maneuver Checklist»**
- Complete clearing turns
- Stabilize the airplane by maintaining altitude and airspeed (90 kts)
- Enter the maneuver at the pivotal altitude by flying diagonally (45°) to the downwind midpoint of the line between the two pylons
- As the reference line of sight approaches the pylon enter a bank as necessary to maintain the line of sight aligned to the pylon
- As the turn is continued, maintain your line of sight on the pylon by increasing bank and adjusting altitude (if the wing tip moves forward of the pylon, pivotal altitude is too low, likewise if the wing tip moves aft of the pylon, pivotal altitude is too high)
- Rollout diagonally downwind, crabbing as necessary to adjust for wind and set-up for the next turn
- During the straight-and-Ievel segment return to the appropriate pivotal altitude
- Perform the next turn exactly as the first, except in the opposite direction
- Exit the maneuver and climb to a safe altitude
- Perform **«Cruise Checklist»**

29.PILOTAGE AND DEAD RECKONING (Cross-country departure procedures)

Objective: To properly establish the airplane on a cross country route.

- When cleared for takeoff, note the time
- After departing the airport area, determine your airplane position and intercept the pre-planned course as soon as possible by reference to landmarks.
- Contact the appropriate FIS to activate flight plan
- Level off at the selected or assigned altitude and set power as planned
- Complete cruise checklist
- Compute actual groundspeed and if actual groundspeed varies significantly (more than 5 kts.) from the estimated/planned groundspeed, revise ETE to the next checkpoint
- Determine the ETA to the next checkpoint and destination (in ZULU time) using the new ground speed calculation
- Verify airplane's position in relation to the planned route within:
    - 3 NM (private)
    - 2 NM (commercial)
- Arrive to the next checkpoint within:
    - 5 min. (private) of the initial or revised ETA
    - 3 min. (commercial) of the initial or revised ETA
- Maintain selected/assigned altitude within:
    - 200′ (private)
    - 100′ (commercial)
- Maintain selected/assigned heading within:
    - 15° (private);
    - 10° (commercial)
- Divide attention inside and outside the airplane all times

30. DIVERSION

Objective: To develop skills necessary to plot a new course and determine new ETA while en route.

- Determine present position and the location of new destination
- Estimate heading to the alternate (pencil method is suggested), avoiding any restricted airspace, obstruction or weather, and turn to that heading
- Notify *ATC*
- Note the actual time
- Plot course on sectional chart
- Measure distance
- Use estimated ground speed to calculate ETE and ETA (in ZULU time)
- Calculate fuel required to new destination
- Select some prominent landmarks to aid in flying the new course
- Fly the course as planned
- Notify FIS as required to amend flight plan
- Close flight plan on completion of flight

Note: When diverting to a nearby airport (25 **nm** or less) and fuel is not critical, the student will be expected to make fuel estimates with a reasonable degree of accuracy rather than actual computations

31. STRAIGHT AND LEVEL FLIGHT (IR)

Objective: To develop the pilot's ability to control the airplane solely by reference to the instruments

- Select an altitude no lower than 1500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Maintain a heading and altitude as specified by the examiner
- Adjust pitch attitude using the Attitude Indicator, positioning the miniature airplane on the horizon bar
- Maintain airplane control by reference to the attitude indicator and crosscheck the performance instruments
- Select 2300 rpm while maintaining level flight
- Re-adjust pitch attitude as necessary to remain in level flight
- Hold attitude and allow the airplane to stabilize on proper airspeed and altitude
- Set stabilator trim for "hands off' pressure after straight and level flight is achieved
- Perform **«Cruise Checklist»**

32. CONSTANT AIRSPEED CLIMB (IR)

Objective: To develop the pilot's ability to maintain airplane control solely by reference to the instruments while performing climbs at a constant airspeed.

- Select an altitude no lower than 1500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Maintain a specific heading as directed by the examiner
- Add full power and simultaneously apply back pressure on control wheel to establish the approximate pitch attitude (roughly 10^0), which will result in desired climb airspeed
- Maintain the climb attitude by reference to the attitude indicator and crosscheck the airspeed indicator for desired performance
- Set elevator trim for "hands off" pressure after constant airspeed climb is achieved
- Lead the level off by approximately 10% of the rate of climb
- Reduce the power to the cruise power setting when the airspeed increases to within 5 kts to the cruise airspeed
- Perform **"Cruise Checklist"**

33. CONSTANT AIRSPEED DESCENTS (IR)

Objective: To develop the pilot's ability to maintain airplane control solely by reference to the instruments while performing descends at a constant airspeed.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Maintain a specific heading as directed by the examiner
- Reduce the power to approximately 1700 rpm and adjust the pitch as necessary to achieve the desired descent airspeed (i.e. 90 kts.)
- Maintain the pitch attitude by reference to the attitude indicator and crosscheck the airspeed indicator for desired performance
- Set elevator trim for "hands off' pressure after constant airspeed descent is achieved
- Lead the level off by approximately 10% of the rate of descend (VSI), increase pitch to the horizon and add power to the cruise power setting 2300 RPM
- Perform «Cruise Checklist»

34. CONSTANT RATE CLIMBS (IR)

Objective: To develop the pilot's ability to maintain airplane control solely by reference to the instruments while performing climbs at a constant rate.

- Select an altitude no lower than 1500' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Maintain a specific heading as directed by the examiner
- Add full power and simultaneously apply back pressure on control wheel to establish the approximate pitch attitude (roughly *5°),* which will result in desired climb rate
- Maintain the climb attitude by reference to the attitude indicator and crosscheck the vertical speed indicator for desired performance
- Set elevator trim for "hands off' pressure after the desired rate of climb is stabilized
- Lead the level off by approximately 10% of the rate of descend (VSI), increase pitch to the horizon and add power
- Reduce the power to the cruise power setting 2300 RPM when the airspeed increases to within 5 kts to the cruise airspeed
- Perform «Cruise Checklist»

35. CONSTANT RATE DESCENTS (IR)

Objective: To develop the pilot's ability to maintain airplane control solely by reference to the instruments while performing descends at a constant rate.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Maintain a specific heading as directed by the examiner
- Reduce the power to approximately 1700 rpm and adjust the pitch as necessary to achieve the desired descent rate (i.e. 500fpm.)
- Maintain the pitch attitude by reference to the attitude indicator and crosscheck the vertical speed indicator for desired performance
- Set elevator trim for "hands off' pressure after desired rate of descent is established
- Lead the level off by approximately 10% of the rate of descend (VSI), increase pitch to the horizon and add power to the cruise power setting 2300 RPM
- Perform «Cruise Checklist»

36. RECOVERY FROM UNUSUAL ATTITUDES

Objective: To develop the pilot's ability to recognize and properly recover from unusual attitudes by reference to instruments.

- Select an altitude that allows recovery no lower than1500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- The student is instructed to take his hands and feet off the controls and close the eyes
- The instructor will put the airplane into a critical flight attitude, and then the instructor will clearly say: "Open your eyes and recover"
- The student will look at the flight instruments or outside depending on the conditions of training (VFR or IFR) to determine what kind of critical attitude the airplane is in, and the most appropriate recovery procedure

Nose High:

Indications: Airspeed low, trend decreasing Recovery:

- Apply full power
- Lower the nose to level pitch attitude
- Level wings
- Return to straight and level flight
- Perform «Cruise Checklist»

Nose Low:

Indications: Airspeed high, trend increasing Recovery:

- Decrease power to idle
- Level the wings with coordinated ailerons and rudder
- Smoothly raise the nose to level flight attitude
- Return to straight and level flight with power
- Perform «Cruise Checklist»

Note : Always calculate Va for the specific weight of your flight and pay due attention while manoeuvring the aircraft abruptly.

37. PRECISION INSTRUMENT APPROACH

Objective: To develop pilot's ability to accurately fly a precision approach while maintaining situational awareness in simulated or actual instrument conditions.

- Prior to reaching the IAF (Initial Approach Fix) select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach
- Review the instrument approach procedure to assure flying the proper course and altitude (approach briefing)
- Select and check proper setting of navigation and communication radios, as well as marker beacons
- Review the missed approach procedures or ATC instructions as appropriate
- Perform the "Pre-Landing Checklist", slow the airplane to 90 kts. After reaching one of the following positions as appropriate:
    - Crossing the IAF (in case of full approach)
    - Within 30° of the final approach course
    - Within 5 NM of the FAF
- "One dot" above the glide slope interception, perform the following:
    - Reduce throttle to 1700 – 1800 rpm
    - Select flaps 10°
    - Trim to maintain a target speed of 90 kts. And the appropriate rate of descent (as a rule of thumb, ground speed x 5 will provide you with a 3° glide slope)

- Note the time over the Outer Marker
- Correct for small deviations on localizer with coordinated aileron and rudder pressures
- Correct for small deviations on glide slope by increasing or decreasing the airplane's power settings and deviations of airspeed with proper adjustment of pitch
- At DA (decision altitude), continue to landing or execute missed approach procedure as appropriate

38. NON-PRECISION INSTRUMENT APPROACH

Objective: To develop pilot's ability to accurately fly a non-precision approach while maintaining situational awareness in simulated or actual instrument conditions.

- Prior to reaching the IAF (Initial Approach Fix) select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach
- Review the instrument approach procedure to assure flying the proper course and altitude (approach briefing)
- Select and check proper setting of navigation and communication radios
- Review the missed approach procedures or ATC instructions as appropriate
- Perform the "Pre-Landing Checklist", decrease airspeed to 90 kts. After reaching one of the following positions as appropriate:
  - Crossing the IAF
  - Within 30° of the final approach course
  - Within 5 NM of the F AF
- At the FAF(final approach fix) perform the following:
  - Note the time
  - Select flaps 10°
  - Reduce throttle to 1700 – 1800 rpm
- With positive guidance, commence descent to the MDA
- Establish and maintain 700 *ft/min* rate of descent
- Trim as to maintain a target speed of 90 kts.
  - Correct for small deviations in course with coordinated control pressures
  - Initiate a level off 100' above MDA, by smoothly advancing the throttle (approximately 2100 rpm) to maintain altitude at or above the MDA until visual contact and a normal landing can be made
- Continue to a landing or execute missed approach procedure as appropriate

39. MISSED APPROACH

Objective: To develop the pilot's ability to safely perform a missed approach procedure.

- Upon deciding to execute a missed approach procedure, smoothly apply full power
- Pitch for Vy
- When positive rate of climb has been established, retract the flaps
- Proceed with ATC instructions or as published
- Maintain Vy until 1500' AGL then transition to cruise climb airspeed if desired
- Announce intentions on the appropriate frequency, (ex: "Ikaros traffic SX-ARA is going around, departing to the north, IKAROS" or "Rodos Tower SX-ARC is going around")
- Contact approach control as soon as possible and advise of position and intentions
- Above 1000' AGL perform **"Climb Checklist"**

40. HOLDINGS (IR)

Objective: To provide a guideline to the student on how to perform a holding procedure, using proper entry and wind drift procedures.

- Upon receiving holding instructions
  - Read back to ATC
  - Fly direct to the holding FIX
  - Determine the entry using the thumb rule
  - At least 2 minutes prior reaching the holding fix reduce to the recommended holding speed (90 kts) and maintain that during the whole procedure
- Over the Holding fix
  - Start the time
  - Perform the appropriate entry (direct, parallel, offset)
- Upon reaching the holding fix after the entry is completed
  - Make the turn as instructed (right is standard)
- Abeam the holding fix (Change of the flag **FROM** to **TO**)
  - Start the time
  - Fly for one minute the outbound leg
  - Make the turn as instructed
  - Apply wind correction if needed (see the end of this section)
- While turning inbound start the time as appropriate
  - CDI within 2 dots (VOR HOLD)
  - CDI within 1 dot (GPS HOLD and CDI set to 1nm)
  - Course within 5 degrees (NDB HOLD)
  - **OR** wings level which ever comes **FIRST**
- When over the holding fix
  - **Note the time** (it should be 1 minute)
  - Turn as instructed
  - Inform ATC if required
  - If not 1 minute **adjust the OUTBOUND leg** in order to get 1 minute in the INBOUND leg
- Repeat the procedure for the out- and in-bound legs as many times as required by ATC or examiner
- In case you note that you have wind then whatever wind correction you use in the inbound leg towards the wind then 3 times that you need to apply in the outbound leg.
  - Note that the wind correction on the inbound leg cannot be more than 20^0 unless you are flying through a hurricane!!!

41. DME ARCS

Objective: To provide a guideline to the student on how to perform a DME ARC procedure, using proper entry and wind drift procedures in actual or simulated instrument conditions.

- Upon reception of a DME ARC instruction :
  - Determine your position in relation to the navigation facility used for the arc
  - Make sure you have correct DME indications (GPS or DME set to the appropriate point / navaid)
  - Determine your position in relation to the arc
- Having all the above information perform the following
  - Lead the entry turn by 0.5NM when having a GS of 90 KTS (Adjust that for your current speed!)
    - 120KTS = 1 NM and 150KTS 1,5NM etc
  - Fly the ARC using the "Twist 10^0 Turn 10^0 method"
    - If distance is increasing turn towards the navaid
    - If distance is decreasing turn away from the navaid
  - **Don't Forget** to curry the wind correction on the next 10^0 turn.
- Make sure you have briefed the approach fully and you are ready to exit the ARC as required in each case

42. STEEP TURNS

Objective: To develop the pilot's ability to execute high performance turns with smoothness, coordination, division of attention and proper control techniques.

- 1. Select an altitude that allows recovery no lower than 1500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Select a reference point
- Reduce speed as to maintain 10 kts. below Va
    - **Recommended 95 KTS**
- Visually verify the area in the direction of the turn is still clear
- As the airplane is trimmed for straight and level flight, smoothly roll into a coordinated 360° turn, maintaining a
    - bank of: *45°*
- After passing thru a 30° bank, smoothly apply backpressure to maintain altitude and increase power as necessary to maintain airspeed
- Trim as necessary to relieve control pressure
- Maintain coordinated flight
- Confirm your attitude by referring to both, outside and inside references
- Anticipate the roll out by approximately *20°* (1/2 the bank angle), by smoothly reducing back pressure to maintain altitude and power to maintain airspeed
- Perform the task in the opposite direction when specified
- Complete the **"Cruise Checklist"**

43. STEEP SPIRAL

Objective: To develop the pilot techniques for power-off turns, wind drift control, planning, orientation, and division of attention.

- Select an altitude that allows recovery no lower than 1500' AGL, unless over an airport on which a simulated emergency approach and landing can be performed safely
- Sufficient altitude must be obtained before starting this maneuver so that the spiral maybe continued through a series of at least three 360° turns
- Select a prominent reference point on the ground
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns (scan below!!!)
- Maneuver the airplane downwind within 1/2 mile of the selected reference point
- Abeam the selected reference point, smoothly close the throttle, stabilize and trim the airplane to maintain an airspeed not to exceed Va while establishing a constant radius turn around the point
- A constant airspeed should be maintained throughout the maneuver (trim the airplane as necessary)
- Apply wind drift correction as necessary to maintain a constant radius (steeper bank on downwind headings and shallower on upwind headings)
- Do not exceed 60° of bank at steepest point in turn
- Clear the engine once in every turn (preferably while headed into the wind) by smoothly advancing the throttle to normal cruise power
- Rollout on the entry heading, or when specified towards a specific heading or reference and return to normal cruise speed
- In the event of continuing the maneuver over an airport, proceed with a simulated emergency approach and landing
- Perform **"Cruise Checklist" or "Landing Without Power Checklist"** as required

44. CHANDELLES

Objective: To develop the pilot's coordination, orientation, planning and positive control in a maximum performance climbing turn.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Select a prominent reference point off the wing tip
- Stabilize the airplane by maintaining selected heading, altitude and airspeed at or below Va
- Once abeam the reference, roll into a coordinated 30° bank turn in the direction of the reference point
- Smoothly apply full power while simultaneously increasing the pitch attitude at a constant rate so as to obtain a pitch attitude at the 90° point which, when maintained will result in the aircraft slowing to just above stalling speed at the completion of the 180° of turn
- Maintain a constant 30° bank angle during the first 90° of turn
- After passing the 90° point, begin a slow, constant rate rollout as to arrive at the wings level position just as the 180° turn is completed
- On the second half of the maneuver, the backpressure should be adjusted as required to maintain a constant pitch attitude until reaching the 180° point
- Complete rollout at the 180° point at a minimum controllable airspeed (just above the stall speed)
- Maintain heading ±10°
- Decrease pitch to maintain altitude while increasing airspeed
- After reaching cruise airspeed (90 kts), reduce throttle to cruise power setting
- Perform "Cruise Checklist"

45. LAZY EIGHTS

Objective: To develop the pilot's feel for varying control forces, and the ability to plan and remain oriented while manoeuvring the airplane with positive, accurate control.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing hlrns
- Maneuver the aircraft into the wind to remain within the cleared area
- Select a prominent reference point off the wing tip (90°)
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (90 kts)
- When abeam the reference point, begin a gradual coordinated climbing turn towards the 90° point increasing pitch attitude while you slowly increase the angle of bank
- Passing through the 45° point of turn, airplane's pitch attitude should be at its maximum and bank angle should be about 15°
- From the 45° to the 90° of turn, airplane's pitch attitude should be decreased to the horizon, while continuing to increase the angle of bank to a maximum of 30° (not to exceed 45°)
- The pitch attitude should pass through level flight as the nose passes through the 90° of turn
- Between 90° and 135° of turn, begin decreasing bank angle while continuing to reduce pitch attitude, as to arrive at the 135° of turn at the lowest pitch attitude and approximately 15° bank angle
- As the airplane passes through 135° of turn, roll out is continued. Slowly increase pitch attitude so the airplane returns to straight and level flight at the entry altitude and airspeed as the 180° of turn is reached
- Resume straight and level flight
- Perform "Cruise Checklist"

46. SPINS

NOTE: With the current fleet configuration spins are strictly prohibited.

- For safety reasons only we provide the recovery procedure:
  - Power out
  - Ailerons Neutral
  - Opposite Rudder
  - Elevator Forward
- When rotation stops
  - Rudder Neutral
  - Brake the Dive with elevator
  - Resume normal cruise

Multi Engine Standard Operating Procedures

CONTENTS

General Notes
Carburetor Heat Usage For all exercises in this manual:

- VMC above 3^0C – OFF
- IMC - ON

1. POSITIVE EXCHANGE OF FLIGHT CONTROLS

Objective: To provide guidance on procedures from the transfer of airplane flight controls between pilots during flight with emphasis on ensuring both crewmembers who is flying the plane at all times.

When the Pilot Flying (PF) wishes the Pilot Monitoring (PM) to take control of the airplane refer to the following dialog:

PF: You have the flight controls
PM: I have the flight controls
PF: You have the flight controls

The PF will check that the PM has the flight controls.

When the Pilot Monitoring (PM) wishes to take control pf the aircraft, refer to the following dialog:

PM: I have the flight controls
PF: You have the flight controls
PM: I have the flight controls

The PF will check that the PM has the flight controls.

When the Pilot Monitoring (PM) wishes the Pilot Flying (PF) to take control of the airplane refer to the following dialog:

PM: You have the flight controls
PF: I have the flight controls
PM: You have the flight controls

The PM will check that the PF has the flight controls.

Note that for this manual PF=Student and PM=Instructor

2. INSTRUMENT COCKPIT CHECK

Objective: To ensure proper operation of all instruments, avionics and navigation equipment as required by applicable JAR prior to flight.

<u>During Before Taxi Checklist Flight instrument check Perform the following actions:</u>

- Obtain current ATIS or Aerodrome info from ATC
- Magnetic compass :
  - Case is full of fluid
  - Fluid is clear
  - Indicates known Heading
  - Deviation Card intact and Legible
- STBY Airspeed indicator – indicates Zero
- STBY Attitude Indicator
  - Cage
  - Stabilized within 5 minutes
  - No unusual noises
  - Align miniature a/c with artificial horizon
- STBY Altimeter
  - Current QNH set
  - Indication within 75 feet from airport elevation
- ADHARS
  - Initialized within 5 minutes

  - No error messages
- PFD
  - Current altimeter setting set (read from STBY Altimete)
  - Check Heading with Compass
  - HSI set to GPS 1
  - RMI Set to GPS 2
- Set the Altitude and Speed Bugs as required
- Marker Beacon Lights Test
- GPS
  - Check Database currency
  - Check Reference Aerodrome and position
  - Check HIS and RMI for proper indications
- COM 1 – Set to Ground Control
- COM 1 STBY - Set to Tower
- COM 2 – Set to Departure Control
- COM 2 STBY – Set to Approach Control at Destination
- NAV 1, NAV 2 – Perform VOT if available.
- ADF
  - Tune and identify local beacon
  - Check for proper indications
- NAV 1, NAV 2, ADF – Set as required for the flight.

During Taxi Checklist Flight instrument checkPerform the following actions:

- Magnetic Compass – Turns freely
- Attitude Indicator – Max 5 deg. Of bank
- Heading Indicator – Turns freely
- Turn Coordinator – Blue Arrow in the direction of the turn and ball (black triangle) in the opposite.
- Autopilot - RDY

3. PRE MANEUVER CHECKLIST

It is mandatory for all flight crews operating on a Global Air Services airplane to perform this checklist prior to the start of any maneuver.

Objective: To ensure proper aircraft configuration prior to performing any maneuvers.

- **Electric Fuel pumps - ON**
- Fuel Selectors –ON
- Mixtures Rich below 5000 FT
- Recognition Lights – ON
- Battery Master and Alternators – ON
- Magnetos – 4 Switches ON
- Seat Belts – Secured
- Position and intention report – Complete

4. CLEARING TURNS

It is mandatory for all flight crews operating on a Global Air Services airplane to perform this item prior to the start of any maneuver.

Objective: To determine that the airspace surrounding the airplane is clear of other traffic before starting any maneuver.

- Gently lower the wing on the side of the first intended turn and scan the area previously blocked by the wing.
- Perform two medium bank 90-degree turns in opposite direction.
- If any traffic exists take avoidance measures
- Rollout wings level and start the maneuver
- Turning maneuvers should be made in the direction of the last cleared area

5. BEFORE LANDING FLOW CHECK

Objective: To ensure proper aircraft configuration prior to landing.

Midfield Downwind and Base Leg:

- Fuel Selectors - ON
- Carburetor Heat – AS REQ
- Mixtures - RICH
- Landing Gear - DOWN
    - (3 green, no red, one in the mirror)
- Fuel Pumps - ON
- Landing Lights - ON
- Seat Belts - SECURED

Final Leg

- Fuel Selectors - ON
- Mixtures - RICH
- Propellers - FULL FORWARD
- Landing Gear - 3 green, no red, one in the mirror

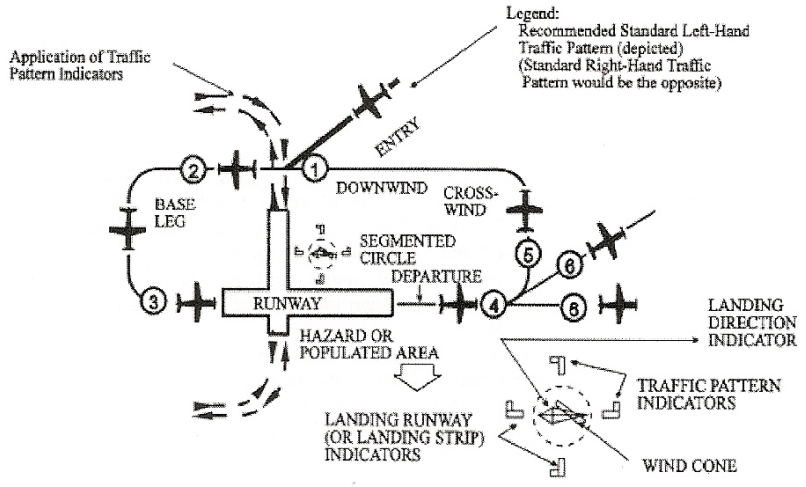
6.TRAFFIC PATTERNS

Objective: To ensure application of proper procedures necessary for safe and efficient operations at controlled and non-controlled airports.
Note: Underlined items apply to non towered airports only. For Controlled airports follow ATC instructions regarding entry and position reports.

- Determine the active runway
- Advise your position and intentions on the Tower or CTAF (119,7)
- Maneuver the airplane for a 45-degree ground track toward the midpoint of the downwind leg.
- Identify the position of any other aircraft in the traffic pattern or vicinity of the airport.
- Pattern altitude and airspeed must be established not less than 2 miles prior to reaching the downwind leg.
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-BTC 4 nm south established on a 45 deg entry for runway 09 Ikaros")
- Verify that the Before landing checklist is completed.
- Reduce power to maintain 120 kts
    - 21"/ 2100 RPM approx.
- Turn the airplane onto the downwind leg approximately ½ mile from the runway.

- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-BTC midfield downwind for runway 09 Ikaros")
- Midfield downwind
  - Gear Down
  - Complete Before landing Flow
- Abeam the Numbers
  - Reduce power to approx 15"
  - Speed should be around 95 KTS
  - Flaps 10 degrees
  - Trim for shallow descent
- Descent to 800 feet before turning base leg at an appropriate point (45deg) from the landing runway.
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-BTC turning right base for runway 09 Ikaros")
- On base leg
  - Maintain 90-95 kts
  - Flaps 25
  - Clear the Final
  - Complete Before landing Flow
- Visually clear the final approach and commence your turn to final so as to roll out with the a/c aligned with the runway and at an altitude no less than 500 feet AGL
- Announce position on CTAF frequency (i.e. "Ikaros traffic SX-BTC turning final for runway 09 Ikaros")
- On final leg
  - Maintain 88 kts
  - Flaps 40
  - Complete Before Landing Flow
- The approach must be stabilized by no lower than 300 feet AGL
- Execute the appropriate landing or go-around procedure

Traffic Pattern Operations Multiengine



7. NORMAL AND CROSSWIND TAKE OFF

Objective: To develop the pilot's ability to safely accomplish a takeoff and departure in normal and crosswind conditions.

- Complete departure briefing
- Communications
    - At an uncontrolled airport, broadcast intentions at CTAF
    - At a controlled airport, obtain clearance from the Control Tower prior to taxi on to the runway
- Complete the Before takeoff Checklist prior to entering the runway
- Check Final approach for traffic
- Taxi the airplane into position, centered on the runway
- Position the flight controls for existing wind conditions
- Apply takeoff power and announce "Engine gauges green, Power available, Airspeed alive"
- Accelerate to Vr while maintaining directional control with the rudder pedals. As airspeed increases, slowly reduce flight control inputs to avoid over controlling.
- At Vr, smoothly apply back pressure to achieve a positive climb attitude
- Accelerate to Vy and when you have a positive rate of climb and you can no more land straight ahead call out "Positive rate, gear up" and retract the landing gear
- On climb out at Vy, maintain ground track along the runway and its extended centerline with use of rudder and ailerons as necessary
- Maintain Vy until a minimum safe altitude is achieved (1000' AGL), then accelerate to cruise climb if desired and set climb power (25"/2500 RPM)
- Complete climb checklist above 1000' AGL

8. SHORT FIELD TAKEOFF

Objective: To develop the pilot's ability to safely and accurately obtain maximum performance from the airplane while executing a short field takeoff and safely clearing all obstacles in the departure path.

- Complete the departure briefing set Flaps 10^0
- Communications
    - At an uncontrolled airport, broadcast intentions on CTAF
    - At a controlled airport, obtain taxi clearance from the control tower prior to taxi onto the runway
- Complete Before Takeoff Checklist prior to entering the runway
- Check Final path for traffic
- Position the airplane for maximum utilization of available runway
- Line up with the centerline and hold position
- Position the flight controls for the existing wind conditions
- Hold the brakes and apply smoothly 2000 RPM
- Check engine instruments for proper indications and announce "Engine gauges green"
- Release the brakes and apply takeoff power
- As the airplane accelerates, maintain the center line with the rudders , check airspeed and announce "airspeed alive" finally adjust the ailerons for the increased speed
- Accelerate to Vr and pitch for Vx
- Once airborne apply the necessary crab angle to maintain the airplane's ground track along the runway extended centerline
- With a positive rate of climb and no more landing distance announce "Positive Rate, Gear Up" and retract the landing gear
- Once the initial obstacles are cleared (airdrome facilities, fence, trees, etc) pitch for Vy and during acceleration retract the flaps
- Maintain Vy until at least 1000' AGL then proceed with cruise climb if desired
- Complete climb checklist above 1000' AGL

9. NORMAL AND CROSSWIND LANDING

Objective: To develop the pilot's ability to safely accomplish an approach, landing and rollout in normal and crosswind conditions.

- Complete the appropriate traffic pattern
- Established on final set the **flaps to 40 degrees** and complete the before landing flow
- Adjust heading to achieve the proper crab angle if necessary
- Coordinate pitch and power to obtain 88 kts and the appropriate descent angle
- Trim to maintain speed and relieve control pressure
- Approach must be stabilized no lower than 400' AGL
- Aim for a point to allow touchdown on the first third of the runway
- At the appropriate height (usually 10' above the runway), simultaneously reduce the power and begin to round out by gently increasing backpressure on the yoke
- In case of crosswind conditions use ailerons into the wind to correct for drift and opposite rudder to keep the airplane's longitudinal axis aligned with the runway centerline
- Smoothly apply backpressure to dissipate airspeed without increasing altitude, allowing the airplane to touchdown at the minimum possible airspeed (close to stall)
- Use of proper crosswind technique will allow to touchdown on the upwind main gear first, followed by the downwind main gear and finally the nose gear
- As the airplane decelerates increase aileron into the wind and maintain directional control with the rudder as necessary to remain on the centerline
- Slow the airplane to normal taxi speed before taxiing clear of the runway
- Complete the after landing checklist when completely clear of the runway

10. SHORT FIELD LANDING

Objective: To develop the pilot's ability to safely accomplish a maximum performance approach and landing

- While on Downwind, select a touchdown point
- Complete the appropriate traffic pattern
- Established on final set **flaps 40** and complete the before landing flow
- Adjust heading to achieve the proper crab angle
- Coordinate pitch and power to obtain 79 kts
- Trim to maintain speed and relieve control pressures
- Aim for a point approximately 200' before your previously selected touch down point
- Approach must be stabilized not lower than 300' AGL
- At the appropriate height (**NOT MORE THAN 10'AGL)**, simultaneously reduce power and begin to round out by gently increasing backpressure on the yoke
- In case of a crosswind conditions use aileron into the wind to correct for the drift and opposite rudder to keep the airplane's longitudinal axis aligned with the runway centerline
- Smoothly apply backpressure to dissipate airspeed without increasing altitude, allowing the airplane to touchdown at the minimum possible airspeed
- Touchdown at or within 100' beyond your selected point
- Once all three wheels have touchdown, retract the flaps and smoothly apply brakes
- Use backpressure on the yoke to aid in aerodynamic braking
- As the airplane decelerates increase aileron into the wind and maintain directional control with the rudder as necessary to remain on the centerline
- Slow the airplane to normal taxi speed before exiting the runway
- Complete the After landing checklist upon exiting the runway

11. GO AROUND

Objective: To develop the pilot's ability to safely perform a go-around/rejected landing procedure

- Complete traffic Pattern Operations
- Upon deciding to execute a go around procedure, immediately but smoothly apply maximum takeoff power Establish a pitch attitude to maintain Vx
- Retract flaps to 25^0 and maintain Vx
- With a positive rate of climb and no more landing area call out "Positive Rate, Gear UP" and retract the landing gear
- When a positive rate of climb is established retract the flaps to 10^0
- Announce intentions on CT AF or tower (ex: "Ikaros traffic SX-BTC is going around runway 09, Ikaros")
- Maintain runway centerline alignment, unless conflicting traffic exists. If another aircraft is on the runway or taking off, alter course to the non-pattern side (or as directed by ATC if at an airport with a control tower), and keep the departing aircraft in sight, manoeuvring to remain clear
- Once all obstacles are cleared, accelerate to Vy, Retract the remaining 10^0 of flaps
- Maintain Vy until 1000' AGL then transition to cruise climb airspeed if desired
- Turn crosswind no earlier than the departure end of the runway
- Re-establish a normal traffic pattern or as directed by ATC

12. SLOW FLIGHT (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize changes in airplane flight characteristics and control effectiveness at low airspeed.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Select a reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (125 kts.)
- Reduce throttle to 15" and maintain altitude as airspeed decreases using coordinated flight controls
- At Blue Line Props go full Forward
- As airspeed approaches 10 kts above stall speed, adjust power for level flight (approximately 1800 to 2000 rpm)
- Trim the airplane to maintain an airspeed at which any further increase in angle of attack, increase in load factor or reduction in power, would result in an immediate stall, (stall warning horn should remain beeping at all times)
- Adjust power to maintain altitude and pitch to maintain airspeed
- Accomplish coordinated straight and level flight, turns, climbs or descends as specified by the examiner
- Divide attention between airplane control, outside and inside references
- Maintain altitude within:
    - ± 100' (private)
    - ± 50' (commercial)
- 13. Maintain airspeed within:
    - + 10/-0 kts (private)
    - + 5/-0 kts (commercial)
- Maintain heading within: ±10°

Recovery Procedure:

- Apply full power, maintain altitude and heading as airspeed increases
- After reaching cruise airspeed (120 kts.), reduce to cruise power setting (approximately 23"/2300 rpm)
- Perform **"Cruise Checklist"**

13. SLOW FLIGHT (LANDING CONFIGURATION)

Objective: To develop the pilot's ability to recognize changes in airplane flight characteristics and control effectiveness at low airspeeds in the landing configuration.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Select a reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (125 kts.)
- Reduce throttle to 15", as airspeed decreases to flap extended speed, maintain altitude and coordinated flight controls and select flaps 10°
- Below 110 lower the landing gear
- Below 100 select flaps 25
- Below 95 KTS, select flaps 40°
- At Blue Line Props go full Forward
- As airspeed approaches 10 kts. Above stall speed, adjust power for level flight (approximately 1800 to 2000 rpm)
- Trim the airplane to maintain airspeed at which any further increase in angle of attack, increase in load factor or reduction in power, would result in an immediate stall, (stall warning horn should remain beeping at all times)
- Accomplish coordinated straight and level flight, turns, climbs or descends as specified by the examiner
- Divide attention between airplane control, outside and inside references
- Maintain altitude within:
    - ± 100' (private)
    - ± 50' (commercial)
- Maintain airspeed within:
    - + 10/-0 kts. (private)
    - + 5/-0 kts. (commercial)

Maintain heading within: ±IO°

Recovery Procedure:

- Apply full power; maintain altitude and heading as airspeed increases
- Reduce flaps to 25°
- At approximately Vx and with positive rate of climb, reduce flaps to 10°
- With a positive rate of climb Retract the landing Gear and pitch for Vy
- At Vy or close to Vy with positive rate of climb, select flaps up
- After reaching cruise airspeed (125 kts.), reduce to cruise power setting (approximately 23"/2300 rpm)
- Complete "Cruise Checklist"

14. POWER OFF STALL (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (125 kts.)
- Reduce power to 15" and maintain altitude as airspeed decreases
- At Blue Line propeller controls go forward
- At 80 kts, reduce power to idle
- Stabilize a descent maintaining 80 kts.
- Power off glide for approximately 3 to 5 seconds
- Transition to a pitch attitude that will induce the stall in straight flight
- Keep the airplane coordinated at all times

- Initiate the recovery procedure:
    - Private: <u>After</u> the stall occurs
    - Commercial: <u>As</u> the stall occurs

<u>Recovery Procedure:</u>

- Reduce the angle of attack just enough to allow the wing to regain lift (for private pilot applicants the nose should be lowered slightly below the horizon. For commercial pilots, the nose should be lowered just enough to allow recovery with the minimum lost in altitude)
- Apply full power and level the wings to return to straight and level flight attitude with a minimum loss of altitude
- Keep the airplane coordinated at all times
- After reaching cruise airspeed (approximately 125 kts.), reduce to cruise power setting (roughly 23"/2300 rpm)
- Perform «Cruise Checklist»

15. POWER OFF STALL (LANDING CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading, altitude and airspeed (125 kts.)
- Reduce throttle to 15", as airspeed decreases to flap extended speed, maintain altitude and coordinated flight controls and select flaps 10°
- Below 110 lower the landing gear
- Below 100 select flaps 25
- Below 95 KTS, select flaps 40°
- At Blue Line Props go full Forward
- Stabilize a descent maintaining 80 kts.
- Power off glide for approximately 3 to 5 seconds
- Transition to a pitch attitude that will induce the stall in straight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private: <u>After</u> the stall occurs
    - Commercial: <u>As</u> the stall occurs

<u>Recovery Procedure</u>:

- Reduce the angle of attack just enough to allow the wing to regain lift (for private pilot applicants the nose should be lowered slightly below the horizon. For commercial pilots, the nose should be lowered just enough to allow recovery with the minimum lost in altitude)
- Apply full power, maintain altitude and heading as airspeed increases
- Reduce flaps to 25°
- At approximately Vx and with positive rate of climb, reduce flaps to 10°
- With a positive rate of climb Retract the landing Gear and pitch for Vy
- At Vy or close to Vy with positive rate of climb, select flaps up
- After reaching cruise airspeed (125 kts.), reduce to cruise power setting (approximately 23"/2300 rpm)
- Complete "Cruise Checklist"

16. POWER ON STALL (CLEAN CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns
- Select a prominent reference point on the ground
- Stabilize the airplane maintaining selected heading, altitude and airspeed (125 kts.)
- Reduce power to 15"
- Increase pitch as necessary to maintain altitude as airspeed decreases
- At Blue Line propeller controls go full forward.
- Upon approaching rotation speed, smoothly add full power
- Transition to a pitch attitude that will induce the stall in straight flight
- Keep the airplane coordinated at all times
- Initiate the recovery procedure:
    - Private: <u>After</u> the stall occurs
    - Commercial: <u>As</u> the stall occurs

<u>Recovery Procedure</u>:

- Reduce the angle of attack and level the wings to return to straight and level flight with a minimum loss of altitude
- After reaching cruise airspeed (approximately 125 kts.), reduce to cruise power setting (roughly 23"/2300 rpm)
- Perform «Cruise Checklist»

17. POWER ON STALL (TAKE OFF CONFIGURATION)

Objective: To develop the pilot's ability to recognize the indications leading to stalls and to make prompt and effective recoveries with a minimum lost of altitude.

This maneuver is prohibited with flaps extended. Since flaps up is an approved takeoff configuration for the Piper Seminole Refer to exercise number 20.

18.PILOTAGE AND DEAD RECKONING (Cross-country departure procedures)

Objective: To properly establish the airplane on a cross country route.

- When cleared for takeoff, note the time
- After departing the airport area, determine your airplane position and intercept the pre-planned course as soon as possible by reference to landmarks.
- Contact the appropriate FIS to activate flight plan
- Level off at the selected or assigned altitude and set power as planned
- Complete cruise checklist
- Compute actual groundspeed and if actual groundspeed varies significantly (more than 5 kts.) from the estimated/planned groundspeed, revise ETE to the next checkpoint
- Determine the ETA to the next checkpoint and destination (in ZULU time) using the new ground speed calculation
- Verify airplane's position in relation to the planned route within:
    - 3 NM (private)
    - 2 NM (commercial)
- Arrive to the next checkpoint within:
    - 5 min. (private) of the initial or revised ETA
    - 3 min. (commercial) of the initial or revised ETA
- Maintain selected/assigned altitude within:
    - 200' (private)
    - 100' (commercial)
- Maintain selected/assigned heading within:
    - 15° (private);
    - 10° (commercial)
- Divide attention inside and outside the airplane all times

19. DIVERSION

Objective: To develop skills necessary to plot a new course and determine new ETA while en route.

- Determine present position and the location of new destination
- Estimate heading to the alternate (pencil method is suggested), avoiding any restricted airspace, obstruction or weather, and turn to that heading
- Notify *ATC*
- Note the actual time
- Plot course on sectional chart
- Measure distance
- Use estimated ground speed to calculate ETE and ETA (in ZULU time)
- Calculate fuel required to new destination
- Select some prominent landmarks to aid in flying the new course
- Fly the course as planned
- Notify FIS as required to amend flight plan
- Close flight plan on completion of flight

Note: When diverting to a nearby airport (40 **nm** or less) and fuel is not critical, the student will be expected to make fuel estimates with a reasonable degree of accuracy rather than actual computations

20. RECOVERY FROM UNUSUAL ATTITUDES

Objective: To develop the pilot's ability to recognize and properly recover from unusual attitudes by reference to instruments.

- Select an altitude that allows recovery no lower than 2500' AGL
- Complete «Pre-maneuver Checklist»
- Complete clearing turns

- The student is instructed to take his hands and feet off the controls and close the eyes
- The instructor will put the airplane into a critical flight attitude, and then the instructor will clearly say: "Open your eyes and recover"
- The student will look at the flight instruments or outside depending on the conditions of training (VFR or IFR) to determine what kind of critical attitude the airplane is in, and the most appropriate recovery procedure

Nose High:
Indications: Airspeed low, trend decreasing Recovery:

- Apply full power (props first!)
- Lower the nose to level pitch attitude
- Level wings
- Return to straight and level flight
- Perform «Cruise Checklist»

Nose Low:
Indications: Airspeed high, trend increasing Recovery:

- Decrease power to idle (Gently please!)
- Level the wings with coordinated ailerons and rudder
- Smoothly raise the nose to level flight attitude
- Return to straight and level flight with power
- Perform «Cruise Checklist»

Note : Always calculate Va for the specific weight of your flight and pay due attention while maneuvering the aircraft abruptly.

21. PRECISION INSTRUMENT APPROACH (both engines)

Objective: To develop pilot's ability to accurately fly a precision approach while maintaining situational awareness in simulated or actual instrument conditions.

- Prior to reaching the IAF (Initial Approach Fix) select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach
- Review the instrument approach procedure to assure flying the proper course and altitude (approach briefing)
- Select and check proper setting of navigation and communication radios, as well as marker beacons
- Review the missed approach procedures or ATC instructions as appropriate
- Perform the "Pre-Landing Checklist", slow the airplane to 120KTS (approximately 18" to 19" MP - 2300 rpm) after reaching one of the following positions as appropriate:
    - Crossing the IAF (in case of full approach)
    - Within 30° of the final approach course
    - Within 5 NM of the FAF
- "One dot" above the glide slope interception, perform the following:
    - Reduce throttles to 16" MP
    - Extend landing gear (Callout: 3 green, no red, one in the mirror)
    - Select flaps 10°
- Trim to maintain a target speed of 95KTS and the appropriate rate of descent (as a rule of thumb, ground speed x 5 will provide you with a 3° glide slope)
- Note the time over the Outer Marker
- Reaching 1000' AGL, perform "Before Landing Flow"
- Correct for small deviations on localizer with coordinated aileron and rudder pressures
- Correct for small deviations on glide slope by increasing or decreasing the airplane's power and deviations of airspeed with proper adjustment of pitch
- At DA (decision altitude), continue to landing or execute missed approach procedure as appropriate

22. NON-PRECISION INSTRUMENT APPROACH

Objective: To develop pilot's ability to accurately fly a non-precision approach while maintaining situational awareness in simulated or actual instrument conditions.

- Prior to reaching the IAF (Initial Approach Fix) select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach
- Review the instrument approach procedure to assure flying the proper course and altitude (approach briefing)
- Select and check proper setting of navigation and communication radios
- Review the missed approach procedures or ATC instructions as appropriate
- Perform the "Pre-Landing Checklist", decrease airspeed to 120 kts. After reaching one of the following positions as appropriate:
    - Crossing the IAF
    - Within 30° of the final approach course
    - Within 5 NM of the F AF
- At the FAF(final approach fix) perform the following:
    - Note the time
    - Select flaps 10°
- With positive guidance, commence descent to the MDA
    - Reduce throttle to 16"
- Establish and maintain 700 *ft/min* rate of descent
- Crossing 1000' AGL Perform Before Landing Flow
- Trim as to maintain a target speed of 90 kts.
    - Correct for small deviations in course with coordinated control pressures
    - Initiate a level off 100' above MDA, by smoothly advancing the throttle (approximately 21") to maintain altitude at or above the MDA until visual contact and a normal landing can be made
- Continue to a landing or execute missed approach procedure as appropriate

23. INSTRUMENT APPROACH (one engine out)

Objective: To develop pilot's ability to accurately fly precision approaches while maintaining situational awareness in instrument conditions with an engine inoperative.

- Prior to reaching the IAF (Initial Approach Fix) select, tune, identify and confirm the operational status of ground and aircraft navigation equipment to be used for the approach
- Review the instrument approach procedure to assure flying the proper course and altitude
- Select and check proper setting of navigation and communication radios, as well as marker beacons
- Review the missed approach procedures or ATC instructions as appropriate
- Perform the "Pre-Landing Checklist", slow the airplane to 120KTS (approximately 18" to 19" MP ~ 2300 rpm) after reaching one of the following positions as appropriate:
    - Crossing the IAF (in case of full approach)
    - Within 30° of the final approach course
    - Within 5 NM of the FAF
- Promptly recognize engine failure maintaining directional control (heading), altitude and airspeed not below Vyse (88KTS)
- Perform the "Engine Failure in Flight" checklist while tracking the selected VOR radial, GPS course or localizer
- Perform the "Feather Inoperative Engine" checklist
- Maintain Vyse or above (as appropriate for the altitude and conditions being flown) and bank into the operative engine as necessary to maximize performance
- Trim the aircraft to minimize the control pressures required to maintain airplane control
- **Final Approach Fix -- Non-Precision Approach**
    - Note the time
    - Extend landing gear (Callout: 3 green, no red, one in the mirror)
- When positive course guidance is achieved, reduce the throttle to approximately 18" to 20" MP and

commence the descent
    - Trim to maintain 88KTS
- Reaching 1000' AGL, perform "Before Landing Flow"
- Correct for small deviations in course with coordinated control pressures
- Initiate a level off 100' above MDA (Minimum Descent Altitude), by smoothly advancing the throttle of the operative engine smoothly to maintain the MDA until a descent to landing can be made
- In case of continuing the approach to a single engine landing, select flaps not to exceed 25° - after a safe landing is assured
- In case of a go around procedure, advance **both throttles(for training flights!)** full forward and proceed with the missed approach as appropriate
- **Final Approach Fix -- Precision Approach**
- "One dot" above the glide slope interception, perform the following:
    - Reduce the throttle on the operating engine to approx. 20" to 22" MP or as required according to density altitude conditions
    - Select gear down (Callout: 3 green, no red, one in the mirror)
- Trim to maintain a target speed of 88kts and the appropriate rate of descent (as a rule of thumb, ground speed x 5 will provide you with a 3° glide slope)
- Note the time over the Outer Marker
- Reaching 1000' AGL, perform "Before Landing Flow"
- Correct for small deviations on localizer with coordinated aileron and rudder pressures
- Correct for small deviations on glide slope by increasing or decreasing the airplane's power and deviations of airspeed with proper adjustment of pitch
- At DA (decision altitude), continue to landing or execute missed approach procedure as appropriate
- In case of a single engine landing, after a safe landing is assured select flaps up to a maximum of 25°
- In case of a go around procedure, advance **both throttles full forward(for training flights!)** and proceed with the missed approach as appropriate

NOTE: Callouts remain the same as with both engines so refer to both engine instrument approaches.

24. MISSED APPROACH

Objective: To develop the pilot's ability to safely perform a missed approach procedure.

- Upon deciding to execute a missed approach procedure, smoothly apply full power
- Pitch for Vy
- When positive rate of climb has been established, retract the flaps and gear
- Proceed with ATC instructions or as published
- Maintain Vy until 1500' AGL then transition to cruise climb airspeed if desired
- Announce intentions on the appropriate frequency, (ex: "Ikaros traffic SX-BTC is going around, departing to the north, IKAROS" or "Rodos Tower SX-BRC is going around")
- Contact approach control as soon as possible and advise of position and intentions
- Above 1000' AGL perform **"Climb Checklist"**

25. HOLDINGS (IR)

Objective: To provide a guideline to the student on how to perform a holding procedure, using proper entry and wind drift procedures.

- Upon receiving holding instructions
    - Read back to ATC
    - Fly direct to the holding FIX
    - Determine the entry using the thumb rule
    - At least 2 minutes prior reaching the holding fix reduce to the recommended holding speed (90 kts) and maintain that during the whole procedure
- Over the Holding fix

  - Start the time
  - Perform the appropriate entry (direct, parallel, offset)
- Upon reaching the holding fix after the entry is completed
  - Make the turn as instructed (right is standard)
- Abeam the holding fix (Change of the flag **FROM** to **TO**)
  - Start the time
  - Fly for one minute the outbound leg
  - Make the turn as instructed
  - Apply wind correction if needed (see the end of this section)
- While turning inbound start the time as appropriate
  - CDI within 2 dots (VOR HOLD)
  - CDI within 1 dot (GPS HOLD and CDI set to 1nm)
  - Course within 5 degrees (NDB HOLD)
  - **OR** wings level which ever comes **FIRST**
- When over the holding fix
  - **Note the time** (it should be 1 minute)
  - Turn as instructed
  - Inform ATC if required
  - If not 1 minute **adjust the OUTBOUND leg** in order to get 1 minute in the INBOUND leg
- Repeat the procedure for the out- and in-bound legs as many times as required by ATC or examiner
- In case you note that you have wind then whatever wind correction you use in the inbound leg towards the wind then 3 times that you need to apply in the outbound leg.
  - Note that the wind correction on the inbound leg cannot be more than 20^0 unless you are flying through a hurricane!!!

26. DME ARCS

Objective: To provide a guideline to the student on how to perform a DME ARC procedure, using proper entry and wind drift procedures in actual or simulated instrument conditions.

- Upon reception of a DME ARC instruction :
  - Determine your position in relation to the navigation facility used for the arc
  - Make sure you have correct DME indications (GPS or DME set to the appropriate point / navaid)
  - Determine your position in relation to the arc
- Having all the above information perform the following
  - Lead the entry turn by 1NM when having a GS of 125 KTS (Adjust that for your current speed!)
    - 90KTS = 0,5 NM and 150KTS 1,5NM etc
  - Fly the ARC using the "Twist 10^0 Turn 10^0 method"
    - If distance is increasing turn towards the navaid
    - If distance is decreasing turn away from the navaid
  - **Don't Forget** to curry the wind correction on the next 10^0 turn.
- Make sure you have briefed the approach fully and you are ready to exit the ARC as required in each case

27. STEEP TURNS

Objective: To develop the pilot's ability to execute high performance turns with smoothness, coordination, division of attention and proper control techniques.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete **"Pre-maneuver Checklist"**
- Complete clearing turns
- Select a reference point
- Reduce speed as to maintain 10 kts. below Va
  - **Recommended 110 KTS**

- Visually verify the area in the direction of the turn is still clear
- As the airplane is trimmed for straight and level flight, smoothly roll into a coordinated 360° turn, maintaining a
    - bank of: *45°*
- After passing thru a 30° bank, smoothly apply backpressure to maintain altitude and increase power as necessary to maintain airspeed
- Trim as necessary to relieve control pressure
- Maintain coordinated flight
- Confirm your attitude by referring to both, outside and inside references
- Anticipate the roll out by approximately *20°* (1/2 the bank angle), by smoothly reducing back pressure to maintain altitude and power to maintain airspeed
- Perform the task in the opposite direction when specified
- Complete the **"Cruise Checklist"**

28. MANOEUVRING WITH ONE ENGINE INOPERATIVE

Objective: To develop the ability to properly identify, troubleshoot, and if necessary, secured and re-start an engine during cruise flight.

- Promptly recognize engine failure maintaining directional control (heading), altitude and airspeed not below Vyse (88KTS)
- Perform the "Engine Failure in Flight" checklist while turning towards the closest airport
- Above 2500' AGL perform the "Troubleshoot Inoperative Engine" checklist in the event the engine doesn't start
- If restarting the engine is unsuccessful, perform "Feather Inoperative Engine" checklist
- Maintain Vyse or above (as appropriate for the altitude and conditions being flown) and bank into the operative engine as necessary to maximize performance
- Trim the aircraft to minimize the control pressures required to maintain airplane control
- After completion of the maneuver follow the "Air Start Inoperative Engine" (unfeathering procedure) checklist
- During restarting procedure monitor engine instruments to allow proper engine warm-up (green arc indications) prior to setting normal cruise power
- Resume normal cruise altitude and airspeed
- Perform "Cruise Checklist"

NOTE: Engine failure will be simulated by reducing throttle only. Engine feathering will be simulated using zero thrust (12" MP - 2000 rpm) only after the student has simulated pulling back on the propeller lever.
Engine shutdown procedures will be performed not lower than 3000'AGL.

29. Vmc DEMONSTRATION

Objective: To develop the pilot's ability to recognize the indication of loss of directional control due to attempted flight below Vmc (56 KTS) with an engine inoperative and then to execute a proper recovery procedure.

- Select an altitude that allows recovery no lower than 3000' AGL.
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Select a prominent reference point
- Stabilize the airplane by maintaining selected heading,
- altitude and airspeed (110 KTS)
- Reduce throttle to 15" MP while maintaining altitude
- Verify flaps up, Confirm gear up, Cowl Flaps Open
- Select propeller levers smoothly full forward at Blue Line Vyse (88 KTS)
- At Vyse (88KTS), retard the throttle on the left engine to idle, place the right engine throttle to full power using right rudder input to maintain directional control

- Bank 3° to 5° into the right engine and adjust the amount of rudder input to maintain directional control
- Slowly increase the angle of attack to reduce the airspeed at a rate of 1 knot per second. As the airspeed decreases, rudder input must be increased to maintain directional control
- Recover at the first indication of a stall, buffet or loss of directional control, whichever occurs first

Recovery Procedure:

- Retard throttle on the right engine to 50% while simultaneously decreasing the angle of attack as necessary to regain airspeed and directional control
- Reaching Vxse (82KTS), apply full power on the right engine and continue accelerating to Vyse (88 KTS)
- Maintain Vyse and climb to the original altitude and heading

NOTE: Recover within 20° of the entry heading.

30. ENGINE FAILURE DURING TAKEOFF BEFORE Vmc

Objective: To develop the pilot's ability to recognize and react to an engine failure on ground roll and to maintain directional control through the aborted takeoff. The aircraft must remain within 15^0 of the runway centerline.

- During the initial takeoff roll, the instructor will simulate failure of one engine by either retarding one of the mixtures or applying slight rudder pressure
- The student will react to the differential thrust immediately by closing both throttles to idle while maintaining directional control with rudder and smoothly applying brakes as necessary
- The instructor will notify the student weather to stop or continue the takeoff

NOTE: Engine failure will not be simulated at a speed greater than 40KTS. The airplane must remain within 15' of the runway centerline.

Instructor Note : In case the student doesn't react to the differential thrust closing both mixtures to regain aircraft control is accepted but the decision to continue should be made after a complete stop and a check that power is restored in both engines fully.

31. ENGINE FAILURE AFTER LIFT OFF

Objective: To develop the student ability in promptly recognizing an engine failure after lift off, determine the action to be taken and continuing or discontinuing the takeoff attempt as appropriate.

- Take into consideration prior to beginning the takeoff all operational factors that could affect the maneuver, such as aircraft performance, density altitude, runway length, surface conditions, wind, obstructions, etc
- Promptly recognize engine failure and maintain directional control while pitching for Vyse (88KTS)
- Verify mixture, propeller and throttle controls are full forward
- Confirm flaps and gear up
- Identify failed engine (dead foot, dead engine)
- Verify failed engine with throttle (simulated)
- Simulate feathering inoperative engine by retarding the inoperative engine propeller 1cm back (The examiner will select zero thrust on the inoperative engine: 12.5" MP - 2000 rpm)
- Bank 3° to 5° towards the operative engine
- In the event that positive rate of climb cannot be obtained at Vyse, continue increasing pitch up to Vxse if necessary
- Announce ATC or CTAF(119,7) of the malfunction and intentions to be followed
- Divides attention between airplane control, flight path and orientation
- Maintain a safe altitude (Traffic Pattern Altitude) and a safe airspeed (88KTS or above if feasible)
- Monitor operative engine gauges to avoid overstressing the engine
- Return for landing at the airport or suitable landing area

NOTE: Engine failure will only be simulated by reducing the appropriate throttle below 3000 AGL. Furthermore, engine failure after takeoff will not be simulated below 200' AGL

32. APPROACH AND LANDING WITH AN INOPERATIVE ENGINE

Objective: To develop the pilot's ability to safely accomplish an approach and landing with an operative engine.

- Establish and maintain traffic pattern altitude if possible (or at least climb to 700' AGL)
- Execute a normal traffic pattern
- Ensure the appropriate emergency checklist is complete
- While on downwind maintain not less than Vyse
- Once established on base, select gear down (verify and callout: "Three green, no red, one in the mirror") and flaps 10°
- On final leg: Maintain 88KTS Flaps 25° (maximum)
- Complete "Before Landing Flow" check
- Approach must be stabilized not lower than 300' AGL
- Use of proper crosswind technique will allow to touchdown on the upwind main gear first, followed by the downwind main gear and finally the nose gear
- As the airplane decelerates increase aileron into the wind and maintain directional control with the rudder as necessary to remain on the centerline
- Decelerate the airplane to normal taxi speed before taxiing clear of the runway while smoothly applying brakes
- Complete the "After Landing Checklist" upon exiting the runway

NOTE: Always plan the approach accordingly as to avoid executing a single engine go-around. In the event that a go-around maneuver has to be initiated, it will be performed **with both engines.**

33. SPINS

NOTE: With the current fleet configuration spins are strictly prohibited.

- **For safety reasons only we provide the recovery procedure:**
  - Power out
  - Ailerons Neutral
  - Opposite Rudder
  - Elevator Forward
- **When rotation stops**
  - Rudder Neutral
  - Brake the Dive with elevator
  - Resume normal cruise

34. EMERGENCY DESCEND

Objective: To develop pilot's ability to recognize a condition that requires an immediate descent to a lower altitude and how to perform this descent in a timely manner without exceeding the limitations of the airplane.

- Select an altitude that allows recovery no lower than 1500' AGL
- Complete "Pre-maneuver Checklist"
- Complete clearing turns
- Close the cowl flaps
- Reduce throttles to idle
- Select gear down (below 140 KTS) Verify and callout: "Three green, no red, one in the mirror"
- Advance propeller levers smoothly full forward
- In smooth air, increase speed as you descend up to 140 KTS Vle (maximum landing gear extended speed).
- In turbulent air do not exceed Va
- Perform shallow "S" turns while descending

- When approaching the desired altitude as assigned by the instructor, level off smoothly without exceeding any limitations. Retract the gear with a positive rate climb (or zero at least) below 125 KTS.
- Then add cruise power 23”/2300 RPM
- Resume normal cruise and open the cowl flaps as appropriate (verify CHT)
- Perform "Cruise Checklist"

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SECTION 4

PERSONNEL TRAINING

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Personnel Structure

Global Air Services is staffed with the appropriate personnel according to JAR-FCL. Significant consideration is given to the structure of Global Air Services personnel. When possible all postholders have a deputy for their position, so the operation of the company is not disrupted by the absence of one of the postholders.

At all times, at least the following positions are manned: Accountable Manager, Head of Training, Chief Flight Instructor, Chief Ground Instructor and Quality Manager. Furthermore, deputies for the Accountable Manager, Head of Training and Chief Flight Instructor are employed.

According to JAR-FCL for every Flight Instructor employed a maximum of six (6) students are active in the FTO. Global Air Services trying to be even more efficient, for every Flight Instructor employed a maximum of five (5) students are active in flight training. Note that the above number does not include students training in theoretical knowledge.

Although JAR-FCL does not specify the ratio between Ground Instructors and student training in theoretical knowledge, Global Air Services employee a minimum of four (4) Ground Instructors for the ATPL residential theoretical courses.

Standardisation Procedure

Great effort for standardisation of the personnel is made. Standardisation is very important for Global Air Services, since the training provided is of high quality, and the standard must be upheld for all students. The Head of Training is responsible of the standardisation of all Instructors, as well as the Chiefs. The Chief Flight Instructor is responsible of the standardisation of all Flight Instructors. The Chief Ground Instructor is responsible of the standardisation of all Ground Instructors.

In order to attain the desired standardisation of all personnel, the following procedures are in place:

- Scheduled and Unscheduled Meetings
- Scheduled and Unscheduled Evaluations
- Scheduled and Unscheduled Proficient Checks
- Scheduled and Unscheduled Safety Training
- Personnel Refresher Courses
- Use of Uniform for flight employees
- Use of custom made handbook for basic flight training
- Use of custom made handbook for instrument flight training

Meetings Procedure

There are scheduled and unscheduled meetings. The scheduled meetings take place in fixed periods of time for a specific subject. The unscheduled meetings are called randomly when a situation has risen that requires the attention and education of personnel on a specific subject. Moreover, there are official and unofficial meetings. During unofficial meetings written reports of any kind are not required. During official meetings there are always written reports including at least the following information:

- Date of meeting
- Purpose of meeting
- Attended personnel and/or students
- Subjects discussed in meeting

Meetings take place between:

- Postholders and Instructors
- Postholders and Students
- Instructors and Students

Meetings are called by Postholders, Instructors and/or Students. Usually meetings are arranged by the secretaries for the place and time to be conducted, as well as to inform the people who will attend.

The scheduled meetings of Global Air Services:

Name/Purpose	Subjects	Time Interval	Attended
Annual Meeting	Report of all Departments, Predictions for next year, evaluation of last year, financial report, etc	Once per year	All Postholders
Safety Committee Meeting	Safety Issues, report of accidents/incidents, means of prevention, etc (more info on safety training procedures)	Twice per year	All Postholders and Personnel
Global Air Services Board Meeting	Report of all Departments, Predictions for next semesters, evaluation of personnel, disciplinary actions report, etc	Twice per year	Global Air Services Board
Training Department Meeting	Flight & Ground School Departments reports, status of current students, evaluation of students & instructors, changes in syllabus, trends of student performance, etc	Once per month	HOT, CFI, CGI (and deputies), Flight/Ground Instructors
Student Contact Report Meeting	General Evaluation, performance status, and expectation from the student, problems encountered, solutions, assistance to the student, etc	Once per month	Global Air Services and students
Ground School Subject Report Meeting	Evaluation, performance status, and expectation from the student, problems encountered, solutions, assistance to the student, etc	Once per theoretical subject	CGI or Ground Instructor and students

Evaluations & Proficiency Checks Procedure

Evaluation of personnel leads to identification of problems, both in character and in performance as well as the means of solving the problem, or removing the employee if the problem is unsolvable.

The Accountable Manager is evaluated by HCAA, and the shareholders of the Global Air Services SA. Although the shareholders' representatives are not following any specific evaluation procedure, the results, both financial and qualitative are the ultimate evaluation of the senior manager of Global Air Services. The Head of Training is evaluated by HCAA and by the Accountable Manager. Although the Accountable Manager is not following any specific evaluation procedure, the results, in the quality of the training, is the ultimate evaluation of the senior training manager of Global Air Services.

The evaluation of the Chief Flight Instructor and Chief Ground Instructor is the responsibility of the Head of Training. The evaluation of those management positions take place in two ways:

- Direct Evaluation by means of an inspection of files, flight evaluation, or an interview, etc
- Indirect Evaluation by means of observing their own and their subordinates performance.

The evaluation of the Flight Instructors is the responsibility of the Chief Flight Instructor. The evaluation of those positions are taking place under two forms:

- Direct Evaluation by means of an inspection of files, flight evaluation, or an interview, etc
- Indirect Evaluation by means of observing their own and their students performance.

Evaluations of flight personnel, are taking place at least once per year with a check ride, and at least once per month with an indirect observation of a flight (by sitting in the back seat).

The evaluation of the Ground Instructors is the responsibility of the Chief Ground Instructor. The evaluation of those positions are taking place under two forms:

- Direct Evaluation by means of an inspection of files, an interview, etc
- Indirect Evaluation by means of observing their own and their students performance.

Evaluations of ground personnel, are taking place at least once per year with an interview, and at least once per month with an indirect observation of a teaching session (by sitting in the classroom).

Each evaluation leads to a written report that is inserted in the evaluated employee's personal file.

Promotion Procedure

Promotion of Instructors takes place following the recommendation of their Chief Instructor to the Head of Training. The factors when a promotion is considered are the following:

- JAA Requirements of Flight Experience (for Flight Instructors only)
- General Performance as an employee
- Instructor Skills
- Aviator Skills (for Flight Instructors only)

Promotion can have as a consequence an increase on remuneration and responsibilities.

Safety Training Procedure

Global Air Services takes safety in flight training very seriously. For the purpose of prevention of any incident and accident, a Safety Committee is formed.

Members of the Safety Committee:

- Accountable Manager
- Quality Manager
- Head of Training
- Chief Flight Instructor (CFI)
- Maintenance Manager
- Chief Ground Instructor (CGI)

The overall assessment of the flight safety training is held by the Chief Flight Instructor (CFI) and the safety committee. The CFI collects material concerning accident / incident reports related to the type-class of aircrafts used by Global Air Services. This material is placed on the announcement board for the view of all personnel and students pilots or distributed with other means (e-mail). In case that this material is evaluated as critical will be submitted directly to the Head of Training in order immediate corrective actions to be taken.

In order to improve safety, lectures take place in regular intervals concerning matters such as:

- Systems failures as applicable to type-class
- Actions in the event of fire in the air and on the ground, engine cabin and electrical.
- Escape drills, location and use of emergency equipment and exits.
- Airmanship and air traffic control procedures
- Icing
- Use of the check list and crew coordination

The aim of the safety committee is to:

- Ensure and guide all company's personnel to achieve the highest level of safety
- Evaluate all the information concerning incidents and accidents
- Establish procedures arising from the evaluation concerning company's operation
- Evaluate all the proposals for corrective actions that have been made by anyone concerning the company's safety

The Safety Committee has regular meetings that are held at least two times per year. A Safety Committee meeting can be called at any other time by the CFI or the Head of Training in the case of an extraordinary situation if necessary (following a major incident for example).

The agenda of the meetings includes:

- Progress of the actions required from the last meeting
- Reportable occurrences
- Any anonymous report
- Flight safety issues proposed by the Head of Training.
- Flight safety issues proposed by the Quality Manager

- Flight safety issues proposed by the Chief Flight Instructor
- Flight safety issues proposed by the Maintenance Manager
- Flight safety issues arising from other users of the same aircraft types.

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SECTION 5

MASTER DOCUMENTS

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Master Documents

Training & Evaluation Documents

Document 5.1

APPLICATION FORM

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1.0 Applicant's Personal Details

Surname:		**Name:**
ID or Passport no.		**Date of birth:**
Address Street:		**Number:**
City:	**Zip code:**	**Country:**
Mobile Phone:		**Home Phone:**
E-Mail:		**Work Phone:**

2.0 Applicant's Aviation Experience

License Type & No:	**License Issue Date:**
Total Flight Hours:	**Pilot in Command (PIC) Hours:**

3.0 Applicant's Training Course:

Course:	**Enrolment Date:**
Course Duration:	**Ground School Type:**

Available Supporting Documents for Enrolment:

Photocopy of High School Certificate	☐	Four (4) passport photographs	☐
Photocopy of Valid Medical Certificate	☐	Photocopy of Pilot Logbook	☐
Photocopy of ID or passport	☐	Photocopy of Pilot License	☐

With my signature I accept my enrolment to the above Training Course of Global Air Services SA (Global Flight Academy). I have been informed, understand and I fully agree with Global Air Services SA (Global Flight Academy) regulations, as they are set in the approved company's Operation Manual, as well as the minimum cost and the duration of the course I apply for.

_____

Applicant's Signature

Global Air Services SA
GR-FTO-002

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Document 5.2

EXERCISE REPORT SHEET

Student Pilot Full Name	
Flight Instructor Full Name	

Exercise Date	d	d	m	m	y	y	Actual Exercise Flight Time		
A/C Registration	S	X	-				Recommented Exercise Flight Time		

Briefing Duration		**Debriefing Duration**		**Block Duration**	
EXERCISE No.		**COURSE**		**Total Grade**	

Discipline, Attitude & Interest		Assimilate Capacity	
Theoretical Background & Preparation		Situational Awareness	
Flight Skill & Check-list Utilisation		Airmanship (Decision making)	

6: Exceptional 5: Very Good 4: Good 3: Above Average 2: Average 1: Below Average

REMARKS ABOUT STUDENT'S PERFOMANCE

RECOMMENDATIONS FOR NEXT EXERCISE

Flight Instructor's Signature

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Document 5.3

GROUND SCHOOL SUBJECT REPORT

SUBJECT		Ground Instructor	
Class Number		Lecture Date	

Start Time		End Time		Lecture Duration	

LECTURE SUMMARY & KEY POINTS

GENERAL COMMENTS & REMARKS TO CGI

ATTENDANCE REGISTER	
1.	7.
2.	8.
3.	9.
4.	10.
5.	11.
6.	12.

Ground Instructor's Signature

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Document 5.4

GROUND SCHOOL STUDENT STATUS REPORT

Student Name		COURSE Details	

SUBJECT	Ground Instructor	Progress Test Results (%)				Sample Exam Results (%)			Final (%)
FLIGHT PLANNING & MONITORING									
MASS & BALANCE									
PERFORMANCE									
AIR LAW									
OPERATIONAL PROCEDURES									
PRINCIPLES OF FLIGHT									
AIRCRAFT GENERAL KNOWLEDGE									
INSTRUMENTATION									
RADIO NAVIGATION									
GENERAL NAVIGATION									
VFR COMMUNICATIONS									
IFR COMMUNICATIONS									
HUMAN PERFORMANCE									
METEOROLOGY									

GENERAL COMMENTS & REMARKS

Chief Ground Instructor's Signature

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Document 5.5

GROUND SCHOOL STUDENT REPORT

Student Name	
Ground Instructor	

COURSE		Start Date	
SUBJECT		Completion Date	

Lesson Preparation		Attitude & Interest		Assimilate Capacity	
6: Exceptional	5: Very Good	4: Good	3: Above Average	2: Average	1: Below Average

Progress Test	(First)	%	Sample Exam		%
Progress Test	(Second)	%	Sample Exam	(Retake)	%
Progress Test	(Third)	%	Sample Exam	(Retake)	%

REMARKS ABOUT STUDENT'S PERFOMANCE

GENERAL COMMENTS & REMARKS TO CGI

Ground Instructor's Signature

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Document 5.6

STUDENT CONTACT REPORT

Student Name	

Course Attending		Ground School Type	

Contact Date		Contact Method	
Last Contact		Instructor	

SUBJECT & PURPOSE OF CONTACT

COMMENTS & REMARKS OF CONTACT

REPORT TO HEAD OF TRAINING

Signature

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Document 5.7

INSTRUCTOR EVALUATION REPORT

Instructor Name	
Evaluator Name	
Evaluation Type	
Evaluation Date	

Lesson Preparation		Attitude & Interest		Communicability	

6: Exceptional 5: Very Good 4: Good 3: Above Average 2: Average 1: Below Average

REMARKS ABOUT INSTRUCTOR'S PERFORMANCE

GENERAL COMMENTS & REMARKS TO HEAD OF TRAINING

Evaluator's Signature

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Flight Operations Documents

Document 5.8

FLIGHT LOG

DATE	d	d	m	m	y	y

AIRCRAFT	S	X	-			

PILOT (or Student Pilot)	(Write Full Name here)
INSTRUCTOR (or Examiner)	(Write Full Name here)

Training		Rental		Company		Exam	

Dual		Local		IFR		PIC	
Solo		Nav		Night		FI	

Departure Airport					Arrival Airport				

Engine START (UTC)	H	H	M	M	ENGINE TIME (Before Flight)			,	
TAKE OFF TIME (UTC)	H	H	M	M	SECTOR TIME (Take Off to Landing)			,	
LANDING TIME (UTC)	H	H	M	M	ENGINE TIME (After Flight)			,	
Engine SHUT DOWN (UTC)	H	H	M	M	FLIGHT TIME (Start to Shut Down)			,	

HOBBS ARRIVAL					,		FUEL ADDED		Lts
HOBBS DEPARTURE					,		OIL ADDED		Pints
HOBBS DIFFERENCE					,		LANDINGS		

REMARKS & NOTES

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Document 5.9

ΔΕΛΤΙΟ ΑΝΕΦΟΔΙΑΣΜΟΥ

ΠΑΡΑΛΗΠΤΗΣ

Επωνυμία	GLOBAL AIR SERVICES SA									
Διεύθυνση	ΦΙΛΩΝΟΣ 79-81, ΠΕΙΡΑΙΑΣ, 18 535									
Επάγγελμα	ΑΝΩΝΥΜΗ ΕΜΠΟΡΙΚΗ ΕΤΑΙΡΙΑ ΑΕΡΟΠΟΡΙΚΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ									
Α Φ Μ	0	9	4	5	0	0	5	7	7	**Δ Ο Υ** ΦΑΕ ΠΕΙΡΑΙΩΣ

Νηολόγιο	S	X	-				**Τύπος**	PIPER -

ΑΝΕΦΟΔΙΑΣΜΟΣ

Τόπος (Αεροδρόμιο)											
Ημερομηνία	η	η	μ	μ	ε	ε	**Ώρα Τοπική**	ω	ω	λ	λ
AVGAS 100 LL (Λίτρα)				,							

(Σημειώστε με X)

Πληρωμή με Πίστωση	

(Σημειώστε με X)

Πληρωμή Μετρητά	

Αποδεχόμενοι τα παραπάνω:

Όνομα και Υπογραφή Αντιπροσώπου BP HELLAS A.E.	**Όνομα και Υπογραφή Αντιπροσώπου Global Air Services SA**

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Document 5.10

S X -

AIRCRAFT LOG

OIL QTY (QTS)	DATE:	IN:	LDG:	**TOTAL LOG TIME** (Before Flight)	
ARRIVAL	PILOT:	OUT:	T.O:		
	INSTRUCTOR:	FROM:	TO:	**SECTOR TIME** (Take-off to Landing)	
UPLIFT	SUPERVISOR:	REM. FUEL (GALS):			
TOTAL	ASSIGMENT:	UPLIFT FUEL (GALS):		TOTAL LOG TIME	
	No of LDG:	TOTAL FUEL (GALS):			

PRE-DEPART CHECK COMPLETED BY:	CAPTAIN'S ACCEPTANCE:

ITEM	MALFUNCTION	WORK PERFORMED

CAPTAIN'S SIGNATURE:

WORK PERFORMED CHECKED BY:

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Document 5.11

GENERAL DECLARATION

Operator : GLOBAL AIR SERVICES

Nationality & Registration : SX- Flight No: TRN Date: ____/____/_____

Departure From: _____ Arrival at: _____

FLIGHT ROUTING

("Place" column always to list origin, every en-route stop & destination)

PLACE	TOTAL NUMBER OF CREW	NUMBER OF PASSENGERS ON THIS STAGE
		Departure Time :
		Embarking :
		Through on same Flight :
		Arrival Time :
		Disembarking :
		Through on same Flight :

DECLARATION OF HEALTH

Persons on board with illnesses other than airsickness or the effects of accident (including persons with symptoms or sign of illness such as rash, fever, chills, diarrhea) as well as those cases of illness disembarked during the flight_____

_____

Any other condition on board which may lead to the spread of disease_____

_____

Details of each disinfecting or sanitary treatment (place, date, method) during the flight If no disinfecting has been carried out during the flight give details of most recent disinfecting_____

_____

Signature : if required_____

Crew member concerned

FOR OFFICIAL USE ONLY

I declare all statement and particulars contained in this General Declaration and in any supplementary forms required to be presented with this General Declaration are complete exact and true to the best of my knowledge and that all through passengers will continue/have continued on the flight.

Signature.....

Authorised Agent or Pilot in Command

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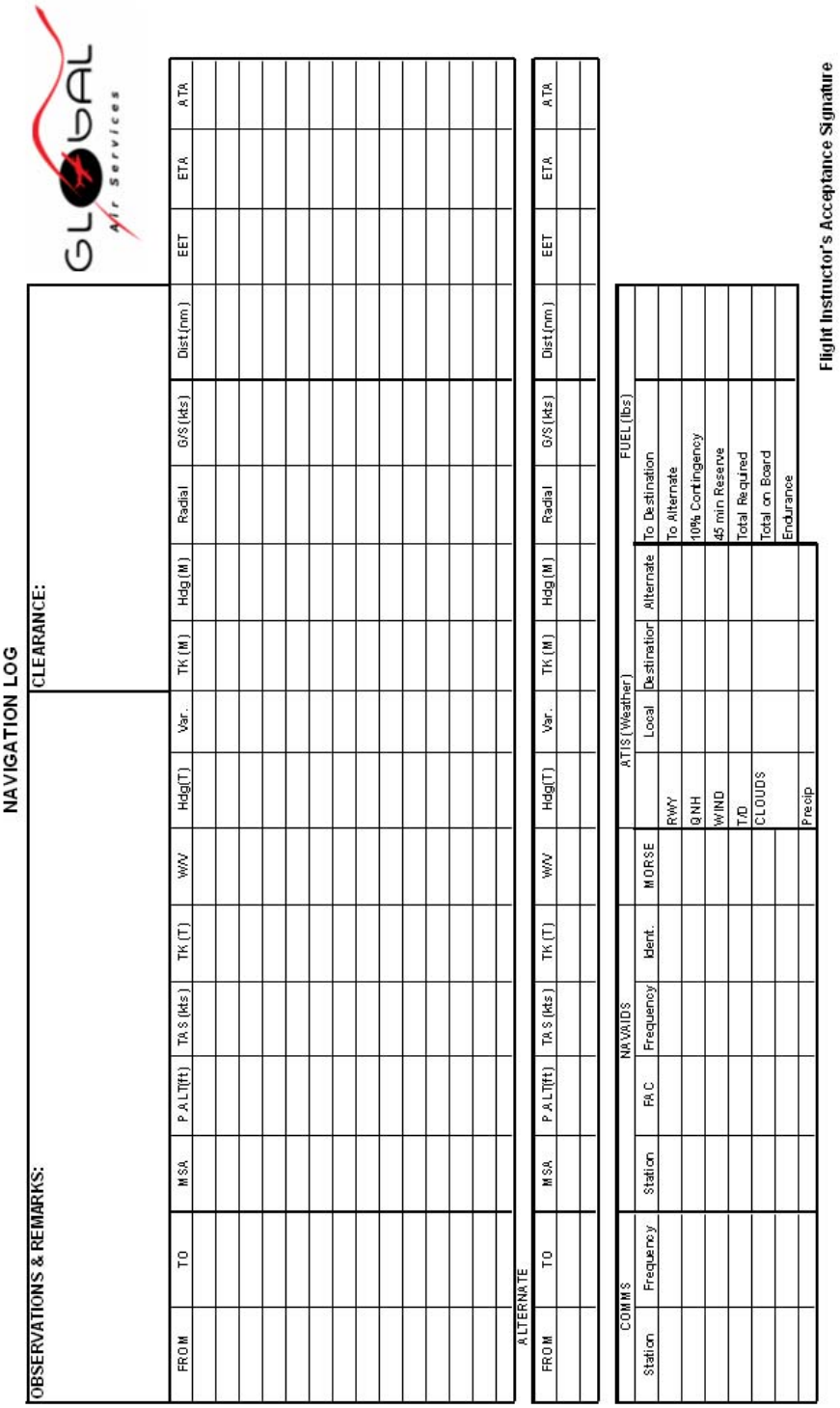
Document 5.12



NAVIGATION LOG

OBSERVATIONS & REMARKS:

CLEARANCE:

FROM	TO	MSA	P.ALT(ft)	TAS (kts)	TK (T)	W/V	Hdg(T)	Var.	TK (M)	Hdg (M)	Radial	G/S (kts)	Dist (nm)	EET	ETA	ATA

ALTERNATE

FROM	TO	MSA	P.ALT(ft)	TAS (kts)	TK (T)	W/V	Hdg(T)	Var.	TK (M)	Hdg (M)	Radial	G/S (kts)	Dist (nm)	EET	ETA	ATA

COMMS

Station	Frequency

NAVAIDS

Station	FAC	Frequency	Ident.	MORSE

ATIS (Weather)

	Local	Destination	Alternate
RWY			
QNH			
WIND			
T/D			
CLOUDS			
Precip			

FUEL (lbs)

To Destination	
To Alternate	
10% Contingency	
45 min Reserve	
Total Required	
Total on Board	
Endurance	

Flight Instructor's Acceptance Signature

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Document 5.13

LOAD SHEET

Date: ____________ *Student (or PIC):* ____________

Registration: ____________ *Aircraft Type:* ____________ *Flight Instructor:* ____________

	Max norm	Max utility	Weight (lbs)	Arm (inch)	Moment (inch-lbs)
Basic Empty Mass:	n/a	n/a			
CREW (front seats)	n/a	n/a			
Basic Operating Mass:	n/a	n/a			
PAX (rear seats):	n/a	n/a			
Baggage:					
ZFM:	n/a	n/a			
Fuel:		n/a			
Ramp Mass:					
Fuel: Start/Taxi/Runup	n/a	n/a			
Take-Off Mass:					
Fuel Burn:	n/a	n/a			
Landing Mass:		n/a			

Notes & Comments

Performance Log

Departure Aerodrome: ____________ Elevation: ____________
QNH: ____________ Temp: ____________
Pressure ALT ____________ Density ALT ____________
W/V: ____________ X-Wind: ____________
RWY in use: ____________ RWY length: ____________
T/O Ground Roll: ____________ Flaps: ____________
T/O Distance: ____________ Climb Perfom: ____________

Cruising P.ALT: ____________ Cruising OAT: ____________
Cruise Power: ____________ Engine RPM: ____________
TAS: ____________

Destination Aerodrome: ____________ Elevation: ____________
QNH: ____________ Temp: ____________
Pressure ALT ____________ Density ALT ____________
W/V: ____________ X-Wind: ____________
RWY in use: ____________ RWY length: ____________
Landing Ground Roll: ____________ Flaps: ____________
Landing Distance: ____________ Glide Perfom: ____________

Flight Instructor's Signature: ____________

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Document 5.14

FLIGHT DELAY / CANCELLATION FORM

Global Employee Details
Full Name:

Customer (Student) Details
Full Name:

Flight Details (Local Time)	
Aircraft Registration: SX -	Flight's **Scheduled** Departure:
Flight's **Scheduled** Date:	Flight's **Actual** Departure: *

Flight Delayed / Cancelled by:	GLOBAL Employee	Customer (Student)	** **Other:** Weather, Traffic, Airport activities, etc

Delay / Cancellation Reason

* Any delay more than 30 minutes from *Flight's Scheduled Departure Time* must be reported in this form according to the company's flight Operations Manual.

** When weather condition was the reason for delay / cancellation then full METAR or TAF must be attached in this form.

Global Employee's Signature

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Other Documents

Document 5.15

MEETING REPORT

SUBJECT	

Location		Date		Duration	

MEETING SUMMARY

ATTENDANCE REGISTER & POSITION IN THE COMPANY

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LOCAL FLIGHT PRE-SOLO WRITTEN TEST

Student Pilot Full Name	

Flight Instructor Full Name	

1. What is the aeroplane's maximum take-off mass (MTOM)?
2. How many fuel tanks does the aeroplane have?
3. What is the usable fuel tank capacity of each tank?
4. What is the aeroplanes safe endurance?
5. What is the aeroplanes average fuel flow?
6. How much is the aeroplane's fuel reserve, and what is the additional quantity required according to the schools Standard Operating Procedures?
7. What is the aeroplane's maximum oil capacity?
8. What is the aeroplane's minimum safe oil capacity?
9. What is the maximum time that the engine must run without sufficient oil pressure after startup before you shut it off?
10. Describe the engine fire during start-up procedure.
11. What type of engine does the aeroplane have?
12. How many cylinders does the engine have?
13. What is the engines horsepower?
14. What type of propeller does it have?
15. How many volts is the aeroplanes electrical system?

16. What is the aeroplane's maximum demonstrated crosswind component?

17. What is the aeroplane's TOD with the existing weather conditions?

18. In which direction is the aerodrome's traffic pattern (circuit)?

19. At what altitude is the aerodrome's traffic pattern?

20. Find the following speeds for the aeroplane, with the existing weather conditions:
    - Vr
    - Vy
    - Vx
    - Vat

21. Describe the (EFATO) Engine Failure after Take-Off Procedure, and what are the memory items?

22. Describe the Engine Failure on Downwind procedure, and what are the memory items?

23. Describe the in-flight Engine Fire procedure?

24. What is the aeroplane's Va?

25. What is the aeroplane's stall speed with 0 degrees flaps?

26. What is the aeroplane's stall speed with 40 degrees flaps?

27. What is the emergency VHF frequency?

28. What is LGTG's tower frequency?

29. What is the LD with the existing weather conditions?

30. What are the VFR minima?

REMARKS ABOUT STUDENT'S PERFORMANCE

Flight Instructor's Signature

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GLOBAL Air Services S.A	FNPTII TECHNICAL LOG	Page No:	

SECTION 1 OF 5 " OPERATOR & FNPTII DETAILS"

	TYPE or Variant of Aircraft	FSTD Qualification Level	STD ID
MEGARA Airport Tel. No: +30229608154	Generic MEP close to PA34-220T	FNPTII, JAR-FSTD A	119-60228-M-1EX

SECTION 2 OF 5 "SCHEDULE MAINTENANCE INSPECTION"

Schedule maintenance is performed according to FNPTII Maintenance Manual in a daily, weekly and monthly base. Details of Maintenance Inspection when carried out are entered in section 3 below "REPORT DETAILS / DESCREPANCY REPORT" and "ACTION TAKEN" as appropriate

SECTION 3 OF 5 "FLIGHT AND MAINTENANCE DETAILS"

DATE:	Exercise No:	INSTRUCTOR:	TRAINEE:	OBS:

FLIGHT DATA (GMT)		FLIGHT HRS		Did any discrepancy prevent training tasks	YES	NO	COMMENTS
START:		HOBS OUT:		Please describe in descrepancy block haw training was affected			
FINISH:		HOBS IN:					
TOTAL HRS:		FLT TIME:		FNPTII Quality Assessment			
				1- Unacceptable / 2- Poor / 3 - Fair / 4 - Good / 5 - Excellent			

ITEM	REPORT DETAILS / DESCREPANCY REPORT	ITEM	ACTION TAKEN	AUTH. PERSON DATE,SIGN
1.		1.		*
2.		2.		*
3.		3.		*

REPORTING: NAME & SIGN.	ACCEPTING: INSTRUCTOR'S SIGN.	operator's preventive maintenance tasks accomplished and FNPTII is operational
		Name: Sign:

SECTION 4 OF 5 " CARRY FORWARD DEFECTS" CHECKED — YES / NO

A SEPARATE DEFERRED DEFECTS LOG IS KEPT

SECTION 5 OF 5 " SAFETY BRIEFING & INSTRUCTIONS PERFORMED BEFORE ENTRY"

Instructor Sign: Trainee Sign:

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MODIFICATION LIST

TYPE or Variant of Aircraft	Generic MEP close to PA34-220T
STD ID	119-60228-M-1EX
Page No	

No	S/W Version	H/W System	Modification Description	Compliance Date	Stamp & Signature

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CARRY FORWARD DEFECT SHEET

TYPE or Variant of Aircraft	Generic MEP close to PA34-220T
STD ID	119-60228-M-1EX
CFDS No	

EXTRACT FROM TECHNICAL LOG						*CARRY FWD CLEAR*		
No	Date	Sign. & Stamp	Log Book Page No	Description	Restrictions	Date	Log Book Page No	Sign. & Stamp

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SECTION 6

FNPTII MAINTENANCE

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MAINTENANCE AND SUPPORT

Documentation

The Documentation for the Elite Evolution S812 FNPT II contains the following:

- Documentation Guide

Complete contents of the documentation package. It lists all the volumes and describes the content of each volume.

- Operating Manuals

Maintenance Operations Manual, includes a general description of the Elite Evolution S812 FNPT II and the major assemblies. Instructor's Operations Manual, describe the Simulator complex and provides checklists and descriptions to enable the Instructor to set-up and operate the Simulator under normal and emergency conditions.

- Maintenance Manuals and Associated Check Lists

This volume contains information primarily concerning the Elite Evolution S812 FNPT II hardware including technical descriptions and instructions for operating and maintaining of this hardware. The documents will comprise the following:

  - Maintenance Manual
  - Check Lsits
  - Vendor Data
  - Test Procedures

- Computer and Peripheral Manuals

The Manufacturer's manuals for the computers and peripherals, giving operating and maintenance information, will be provided under this volume.

Spare Parts

General

All spares will be ordered at Elite Evolution S812 FNPT II order date. Manufacturer supports the Elite Evolution S812 FNPT II complex for five (5) years. In case of obsolescence of parts, the Manufacturer will inform the Customer in advance for the possibility of last buy. Also the Manufacturer tries to find a substitute.

Elite Evolution S812 FNPT II Spare Parts

The operator will keep stored components and spare parts for devices which are readily accessible for replacement and repair. This stock of spare parts includes:

- ✓ 2 Lamps for the projection system
- ✓ Switches for the STD cockpit
- ✓ 2 red lamps and white lamps for the STD cockpit
- ✓ 1 TFT screen 17" for the instructor room.
- ✓ 1 computer compatible with the HOST and VISUAL Computer of the STD

Power supply unit, cards and controllers and a sufficient number of mechanic and electromechanical parts that are required to support the Elite Evolution S812 FNPT II operation will be kept by the manufacturer in-house ready to be send and installed according to warranty contract in 48 hours.

Tools and Test Equipment

Tools and test programs are used by the Manufacturer locally or by via remote access to the operator. For the remote access will be necessary that the training device is connected to the Internet (at least 128 kbit/sec required) in order to grant the accessibility of the system software to the Manufacturer. In this case the access to the system will only take place in close cooperation with the Operator.
The only special tool needed for some the QTG tests is the Dynamometer which before use has to be tested and calibrated by authorized organization. Manufacturer is able to test and calibrate the Dynamometer upon request of the operator.
The software tools used for the controller's card check are the followings:

⇒ ELITE HARDWARE TEST TOOL (EHW) EHW is an easy and intuitive tool to check correct functioning of individual cockpit hardware elements. After launching the software the aircraft type and one of the controller cards have to be selected. In such way each controller card and the hardware attached to it, one by one, can be tested. For each hardware element physically attached to the controller card there is a generic representation (e. g. switch on / off) showing the functionality. Given the status of the displayed element changes when activating the element (e. g. a switch or a push button) it can be determined whether the hardware element is working correctly. Any element showing no response to input has to be further checked for a defect. In case no reaction is visible after selecting a card, verify "Check cards" is selected in the main pull down menu.

⇒ SERIAL DOWN Serial Down is an application allowing hardware functionality checks on a lower level than EHW. After launching the application out of a list of controller cards the required element can be selected. On the command page the aircraft module can be chosen and hardware manipulations show a changing indication on one of the list entries.

Maintainability

The Elite Evolution S812 FNPT II is designed with maintainability in mind. Every effort has been made to ensure that there is minimal need to disassemble equipment or to remove parts. Routing of wire bundles do not interfere with any part or assembly. The design of the Elite Evolution S812 FNPT II is in such that – if required - all components are readily accessible for replacement and repair.

GENERAL MAINTENANCE ACTIVITIES

The following maintenance tasks can be accomplished by the operator : One of the most important preventive maintenance issues is cleanliness. Do not allow beverages, food or tobacco products in or near the trainer. Avoid to introduce dirt (e. g. via shoes) and moistness (e. g. via wet clothes) into the cockpit and IOS area. It is strongly recommended to have uninterrupted air conditioning in the training room to guarantee constant temperature and humidity. In excessive conditions additional air filtration and / or dehumidification may reduce the downtime due to maintenance.

Daily / during or after usage maintenance activities

Time requirement: < 15 min

- ✓ Verify system reports no failures – in case failures are reported, refer to the corresponding trouble shooting section in this manual and report the failure to the manufacturer.
- ✓ During the training session verify that all cockpit and IOS elements are working as expected
- ✓ Verify the inkjet printer has sufficient paper and ink.

- ✓ Clean the cockpit and IOS area after usage
- ✓ For removing finger marks on touch screens / instrument screen, moisten a microfibre cloth and gently wipe the screen surfaces. In case of persistent marks use a mild cleaning agent suitable for glass surfaces. Do not press hard on surfaces.

Weekly maintenance activities

Time requirement: < 40 min, for step 5 two people are required.

- ✓ For the following activities the system must be completely shut down
- ✓ Verify that the blower inlets are clean and free of dust. If required, clean the filters of the simulation and visual computers in the computer rack by taking them out and vacuum clean them.
- ✓ Ensure if the blower is "free running" without excessive noise. Replace if necessary, use ball bearing type cooling fan.
- ✓ Clean the keyboard and mouse
- ✓ Verify that beamer bulb has been used less than the recommended life time. 200 hours before recommended life time is reached, order new bulb. Do not use beamer bulb longer than the recommended life time, as they might blast and damage the beamer.
- ✓ Check systematically whether all switches and operating elements in the cockpit and IOS have the correct feel and detent and whether they are working properly.
- ✓ Check whether all screens show the image content correctly, no colour shifts or erroneous pixel are visible
- ✓ Vacuum clean the cockpit and the IOS area and wipe hard surfaces with a damp cloth
- ✓ Perform calibration of power quadrant / rudder trim controls on Elite Configuration Page -> Controls -> Calibration -> Set

Monthly maintenance activities

Time requirement: < 30 min

- ✓ For the following activities the system must be shut down
- ✓ Check whether all cable connections in the computer rack are tight and firm
- ✓ Check whether cables running to the IOS elements are tight and firm
- ✓ On the beamer, vacuum clean all the air vents to maintain sufficient airflow and reset the time counter. If the message "clean filters" appears between two monthly checks, clean the filters and reset the time counter.

Other maintenance activities

Cockpit conversion (not required if only one cockpit configuration is installed)
Handle individual hardware units with care. Especially when disconnecting and reconnecting the cable avoid excess pressure. Prepare the cockpit conversion carefully. Only use appropriate tools for cockpit conversion.

⇒ Storage of unused items

Store unused cockpit elements in dry and dust free place. Avoid contact between the individual units to prevent scratching.

⇒ Lubrication

In case of disturbing squealing noises, apply some grease on the noisy link. The control loading unit itself should not require any lubrication.

⇒ Scratched windows

The windows of the cockpit consist of plexiglass. Small scratches in the windows can be eliminated using a hair dryer or a heat gun. Carefully apply the heat gun, too much heat can deform the window glass.

⇒ Projector: Image Size Adjustment

Adjust the size of the projected image with the "ZOOM" knob on each projector.
Projector: Image Sharpness Adjustment
Adjust the sharpness of the projected image by turning the focal ring.

Standardization

Standard Industry parts and assemblies are used to a high extent wherever it is applicable or practical. A high grade of common parts are used too.

Warranty

The Manufacturer will guarantee for twenty-four months after the installation that the equipment and any initial spare parts sold to the Customer will be free from defects in materials, workmanship and design under normal use and service. In case of replacing defective material, it is at the Manufacturers discretion if an on site replacement through an Elite technician is needed or if an exchange of the defective material can be done by the customer. Shipping charges from the Manufacturer to the Customer are payed by the Manufacturer during the warranty period. VAT and import taxes have to be carried by the Customer. Shipping charges from the Customer to the Manufacturer are payed by the Customer. In case of an on site replacement by the Manufacturer, travel cost and accommodation to and from the customer will be carried by the Customer.

AIRCRAFT TECHNICAL LOG SYSTEM UTILIZATION.

PREAMBLE

The requirement for an FNPTII Technical Log System is set down in JAR-FSTD A.025
Their purpose is to describe the procedures and means whereby Organization ensures compliance with FSTD regulation as applicable to the organisation and its contractors.
Descriptive procedures appearing in the manual are intended to disclose at least the minimum requirements of the above-mentioned regulations.
The requirements and procedures set down in the TLS manual must be followed to ensure compliance with the regulations. The practices and procedures contained in the ATLS manual are mandatory for both company's staff and all potential contractors' staff.

General

Only authorized personnel from STD operator, and authorized engineers are handling the Technical Log System, within their scope of valid authorization, by impressing their personal inspection stamp or release to service signature in the appropriate box on completion of relevant maintenance work.

The Technical Log shall be on FNPTII room before each flight. The Instructor is responsible for all entries made before of each session using one set of page for each training session. The 24 hours rotation system shall be used in all entries. All time of session entries shall be made using UTC time.
These Log sheets are numbered in sequence and will be remained stored in binders stored per month/year for five years.

FNPTII Technical Log system Description

The Technical Log consists of Discrepancy / Action / Release to Service pages for each session per month, which are pre printed with sequence numbers. Use ballpoint pen and write in English language in Capital Block Letters.

FNPTII Technical Log "Section One" - Company Information

Company Name: GLOBAL Air Services

Logo:

TYPE or Variant of Aircraft
Generic MEP close to PA34-220T
FSTD Qualification Level
FNPTII, JAR-FSTD A

Aircraft Technical Log "Section 2" Scheduled Maintenance Inspection

Schedule maintenance is performed according to FNPTII Maintenance Manual in a daily, weekly and monthly base. Details of Maintenance Inspection when carried out are entered in section 3 below "REPORT DETAILS / DESCREPANCY REPORT" and "ACTION TAKEN" as appropriate.

Aircraft Technical Log "Section 3" instructions

For the use of Technical Log the following instructions must be followed:

FNPTII status shall be entered either by the inbound crew or by CRS staff writing his name, signature. No body else is authorized to make any entry.

All training session details shall be entered in the sheet.

NOTE: Corrections are permitted only by the crew or CRS staff by inserting one simple line ~~(42520.25)~~ and the correct number above the corrected so the correction must allow the corrected number visible

FNPTII Technical Log Explanation

To strengthen the communication links between FNPTII users and Maintenance Personnel, we need to use a common language that will benefit us all. Defects can be diagnosed more quickly, "NO FAULT FOUND" minimized, and the a/c will be more reliable.
Common language for fault reporting is the key to the problem analysis method. A standard simple format leads to more accurate interpretation of the problem by everyone involved. Consider then the following:

WHAT? Is the defect?
WHERE? Is it located?
WHEN? Did it occur?
EXTENT? Of problem

Please bear in mind that only a malfunction or a technical abnormality can be rectified when the problem has been listed in the ATL.

PROCEDURE

Entries and signatures in the ATL by the Instructor (see attached copy of ATL).

NOTE: The Instructor should sign the ACCEPTANCE box, if he is satisfied with FNPTII condition, and to open a new page for the flight that will follow. At the end of flight should make entries as required, as described below, and to sign the REPORTING box.

The Instructor after every session, records all defects, malfunctions discovered, damage to the FNPTII as well as all exceedances of technical limitations occurring the operation of the device (e.g. high temperature, humidity).

Describe a technical trouble in the ATL as detailed as possible.
Only one defect may be entered in a block although more than one block can be used per defect, in which case both blocks must be given the same item number and both must be marked with the word "continued".
If deemed necessary, the responsible Instructor will give additional oral information to the Maintenance personnel.

ITEM	REPORT DETAILS / MALFUNCTION REPORT	GRD. FINDINGS / MAINTENANCE ACTION
01	--DESCRIPTION---------- ---------- CONTINUED	
02	----------	

Each sector defects entry shall have a number starting with 01, then consecutive by through the sector.

If there are no defects, fill the word "NIL".

When erroneous entries are made, delete the entry by ruling diagonal lines across the text, print "Entered in error", and sign-off the entry in the normal manner.

ITEM	REPORT DETAILS / MALFUNCTION REPORT	GRD. FINDINGS / MAINTENANCE ACTION
01	--DESCRIPTION-- ENTERED IN ERROR	

Never destroy a page from the ATL. If you make an error, annotate as such and certify it.

The right hand block "MAINTENANCE ACTION» is for maintenance entries.
In case a defect is reported, and the FNPTII may be dispatched if the defect not affects the specific exercise according to training syllabus.
In this case the Instructor shall enter the description of the defect and the maintenance personnel in the "MAINTENANCE ACTION" block shall enter the following statement:

"FNPTII dispatched restricted to ……. For ……."

Is at the Instructor's discretion to perform a training session if a defect exist.

Each training session has to be entered on a new page. In case of no deficiencies the remark "NIL" shall be entered at Instructor's Reporting

Signs the "ACCEPTING" block when satisfied all items of ATL correctly certified.
Deferred Defects in CFW meet the requirements for the next flight.

FNPTII Technical Log "Section 4" – Carry Forward Defect List

In Carry Forward Defect Sheet enters Acceptable Deferred Defects (ADD) which are technical abnormalities for which immediate corrective action is not possible, e.g. due to lack of spares.
In addition can be entered items
With a defect which does not influence the function and/or operation of the applicable item
Items with deficiencies within allowable maintenance limitations.

No time interval is specified for items in this category but must be repaired at the next convenient possibility.

Only STD Manager is authorized to accept and record ADDs on the CFW forms contained in the ATL cover.

Carry Forward Defect Sheet is serialized by annual type, e.g. 1-2008 is the first sheet of year 2008.

The Defects listed in CFW must be reviewed at least in a DAILY and before any training session.

STD manager may only remove a CFW sheet in case all ADDs have been cleared or the remaining open ADDs have been transferred to a new CFW sheet. The removed sheets have to be stored for five years.

FNPTII Technical Log "Section 5" – User's Safety Briefing

In this section the users (instructor and trainee) signs that they briefed appropriately for safety issues concerning the use of the FNPTII including:

- ✓ Escape Plan
- ✓ Emergency Exits and lights
- ✓ Fire warning system
- ✓ Extinguisher position and use
- ✓ Start-up and Shutdown checklist
- ✓ Power barkers and power shutdown procedure