MANUAL
OF
APPROVED PROCEDURES

Issued by

GLIDING NEW ZEALAND INCORPORATED

This is an uncontrolled document when printed.

AL 34 EFFECTIVE DATE: 1 July 2020

Gliding New Zealand

SPORT NEW ZEALAND

LIST OF EFFECTIVE PAGES

Cover	01-07-20	34	01-06-16	69	03-07-18	104	15-06-20
		35	30-05-19	70	03-07-18	105	22-10-19
2	01-07-20	36	05-03-18	71	05-03-18	106	19-02-17
						107	22-10-19
3	01-07-20	37	01-07-20	72	30-05-19	108	19-02-17
4	01-06-16	38	15-06-20	73	30-05-19		
5	01-07-20	39	01-07-20			109	23-08-08
6	01-03-19	40	01-07-20	74	15-06-20	110	19-02-17
7	30-05-19	41	01-07-20				
8	01-06-16			75	15-06-20	111	01-06-16
		42	15-06-20			112	01-06-16
9	13-08-16	43	19-02-17	76	03-07-18		
10	19-02-17	44	19-02-17			113	22-08-10
11	15-06-20	45	15-06-20	77	01-07-20	114	01-05-10
		46	13-08-16	78	01-07-20		
12	03-07-18	47	15-06-20	79	01-07-20	115	15-06-20
				80	01-07-20		
13	01-07-20	48	15-06-20	81	01-07-20	116	29-10-11
14	01-07-20	49	15-06-20	82	01-07-20	117	29-10-11
		50	13-08-16			118	29-10-11
15	22-10-19	51	01-06-16	83	15-06-20		
16	27-10-18			84	15-06-20	119	13-08-16
17	15-06-20	52	15-06-20	85	01-06-16		
18	15-06-20					120	15-06-20
19	15-06-20	53	03-07-18	86	01-06-16		
20	15-06-20	54	03-07-18	87	15-06-20	121	15-06-20
		55	03-07-18	88	01-06-16	122	22-02-13
21	01-06-16			89	01-03-19	123	22-02-13
		56	01-06-16	90	19-02-17	124	22-02-13
22	01-06-16	57	15-06-20	91	15-06-20	125	22-02-13
		58	01-03-19	92	19-02-17	126	28-05-14
23	15-06-20	59	01-06-16			127	22-02-13
24	15-06-20	60	15-06-20	93	01-06-16		
25	15-06-20	61	01-06-16	94	01-03-19		
		62	30-05-19				
26	19-02-17			95	01-07-20		
27	19-02-17	63	01-06-16	96	15-06-20		
		64	01-06-16	97	19-02-17		
28	05-03-18						
29	15-06-20	65	19-02-17	98	01-06-16		
		66	03-07-18	99	01-06-16		
30	01-03-19	67	19-02-17	100	01-06-16		
		68	19-02-17	101	01-06-16		Pages with
31	19-02-17			102	01-06-16		Bold dates
32	15-06-20						changed at
33	19-02-17			103	01-06-16		AL 34

TABLE OF CONTENTS

PART 2 – OPERATIONS Page

PART 3 – AIRWORTHINESS

GLOSSARY OF TERMS, DEFINITIONS AND ABBREVIATIONS

Definitions

Gliding instructor	means a gliding instructor holding a GNZ rating and endorsements appropriate to the functions being carried out.
GNZ	means Gliding New Zealand Incorporated and the New Zealand Gliding Association Incorporated.
NZGA	means the New Zealand Gliding Association (Inc) and Gliding New Zealand (Inc.).
Powered Glider	means an aircraft equipped with one or more engines which has, with the engine or engines not operating, the performance characteristics of a glider
The Director	means the person is the Director of Civil Aviation of New Zealand.

Abbreviations

AC	Advisory Circular (CAA series or GNZ series)
AD	Airworthiness Directive
ADS-B	Automatic Dependent Surveillance - Broadcast
AGL	Above Ground Level
AFIS	Aerodrome Flight Information Service
AFR	Aerobatic Flight Rating
AIP	Aeronautical Information Publication
AMSL	Above Mean Sea Level
ATC	Air Traffic Control
ATS	Air Traffic Services
ATZ	Aerodrome Traffic Zone
BFR	Biennial Flight Review
CAA	Civil Aviation Authority
CAR	New Zealand Civil Aviation Rules
CFI	Chief Flying Instructor
CFZ	Common Frequency Zone
CTA	Upper Control Area
CTR	Control Zone
DME	Distance Measuring Equipment
ECT	Evening Civil Twilight (end of daylight)
ELT	Emergency Locator Transmitter
ERC	En-Route Chart

FAI	Fédération Aéronautique Internationale
FIC	Flight Information Centre
FIR	Flight Information Region
FL	Flight Level
GAA	General Aviation Area (incorporates GFA)
GPS	Global Positioning System
GFA	Glider Flying Area
GNSS	Global Navigation Satellite System
IAH	Inspection Authority Holder certificate issued by RAANZ or SAC
IAS	Indicated Airspeed
ICAO	International Civil Aviation Organisation
ICR	Instructor Competency Review
IFG	Instrument Flight Guide
IFR	Instrument Flight Rules
IGC	International Gliding Commission (FAI Gliding)
IMC	Instrument Meteorological Conditions (not suitable for VFR)
LL	Lower Level of Controlled Airspace
MBZ	Mandatory Broadcast Zone
MCT	Morning Civil Twilight (beginning of daylight)
MCTOW	Maximum Certificated Take-off Weight
MET	Meteorology
MLAT	Multi Lateration
NAO	National Airworthiness Officer
Nm	Nautical Mile
NOO	National Operations Officer
NORDO	No Radio
NOTAM	Notice to Airmen
NRCC	National Rescue Coordination Centre
NZAIP	New Zealand Aeronautical Information Publication
NZDT	New Zealand Daylight Time (UTC plus 13 hours)
NZST	New Zealand Standard Time (UTC plus 12 hours)
OLC	Online Contest
PDZ	Parachute Dropping Zone
PLB	Personal Locator Beacon
POB	Persons on Board
QFE	Atmospheric Pressure at Aerodrome Level

QGP	Qualified Glider Pilot
QNH	Altimeter Sub-scale Setting Indicating the Height AMSL
RAANZ	Recreational Aircraft Association of New Zealand Incorporated
ROO	Regional Operations Officer
RTF	Radio Telephone
SAC	Sport Aviation Corp Ltd
SAR	Search and Rescue
SFC	Surface
SRC	Sailplane Racing Committee
SSR	Secondary Surveillance Radar
SUPP	AIP Supplement
SVFR	Special Visual Flight Rules
TAS	True Airspeed
TCAS	Traffic Alert and Collision Avoidance System
TM	Transponder Mandatory
TMA	Terminal Control Area
UTA	Upper Control Area
UTC	Co-ordinated Universal Time (the same as GMT or Z)
VAR	Magnetic Variation
VFP	Visiting Foreign Pilot
VFR	Visual Flight Rules
VFG	Visual Flight Guide
VIP	Very Important Person
VPC	Visual Planning Chart
VMC	Visual Meteorological Conditions (conditions suitable for VFR)
VNC	Visual Navigation Chart
WGC	World Gliding Championship
XCP	Cross-Country Pilot Certificate
Z	Coordinated Universal Time (UTC)

Further Definitions and Abbreviations may be found in CAR Part 1 and the General Section of the NZAIP Planning Manual.

AUTHORITY

The Executive Committee of Gliding New Zealand Inc. approves the rules, procedures and guidance contained in this Manual.

The Civil Aviation Authority of New Zealand has certificated Gliding New Zealand as a CAR Part 149 Aviation Recreation Organisation.

SAFETY POLICY

The prime factor in all gliding activities is SAFETY.
GNZ will not compromise on SAFETY.

It is the policy of Gliding New Zealand to maintain high standards of safety and excellence and practices that are in accordance with the Civil Aviation Rules and the Manual of Approved Procedures.

These standards are understood and maintained at all levels of the Association by building knowledge, best practices, skills and attitudes that enhance safety for every member of the Association.

Steven G Wallace
President
Gliding New Zealand Inc.
3 July 2018

FOREWORD

Nothing contained in this Manual is to be construed as:

(a) Preventing individual GNZ affiliates from introducing more restrictive procedures, as may be required to suit local conditions, etc., or

(b) Relieving the individual glider pilot of their responsibility to take any action in emergency or unusual circumstances, which they consider necessary to preserve the safety of the aircraft, its occupants, or any third party.

PUBLICATIONS

1. Manual of Approved Procedures (MOAP)

The MOAP consists of three parts, each including appropriate Appendices, as follows:

Part 1 – Administration. Part 1 covers the Association's aims, organisation and procedures for exercising the delegated authority from the Director, CAA, in accordance with GNZ's Part 149 exposition. It also addresses finance, and the sporting aspects of gliding in New Zealand.

Part 2 – Operations. Part 2 details the operational requirements, including pilot, instructor and tow pilot training, prescribed by the Executive and the Operations Committee in accordance with the GNZ exposition.

Part 3 – Airworthiness. Part 3 details the airworthiness requirements, including engineer training and maintenance procedures for gliders, prescribed by the Executive and the National Airworthiness Officer in accordance with the GNZ exposition.

2. Forms

Forms are a necessary part of the procedures for managing GNZ's application and other processes.

3. GNZ Instructors' Manual

This manual contains the instructional techniques and procedures for GNZ gliding instructors to follow during the training of glider pilots.

4. Glider Tow Pilot Training Manual (AC 2-09)

This manual contains the procedures for the conduct of glider aerotow operations and the training of glider tow pilots.

5. GNZ Advisory Circulars

5.1 GNZ Advisory Circulars provide advice to affiliates on how to comply with the requirements of the MOAP. They may also provide information of a more general nature considered of use to affiliates for improving the safety, efficiency and effectiveness of their gliding operations.

5.2 GNZ Advisory Circulars are documents authorised by the President and form part of the MOAP.

6. Flight Training Programme http://training.gliding.co.nz/

This is a web-based programme providing extensive course material to provide a safe and efficient path to becoming a competent glider pilot, and to present a vision for what is possible in the sport.

7. Distribution

7.1 The prime means of distribution of all GNZ publications will be via GNZ's website homepage at http://gliding.co.nz and flight training programme at http://training.gliding.co.nz/

7.2 Should a printed copy need to be provided by GNZ, a charge for printing may be made.

8. Amendments and Document Control

8.1 Publications will need to be amended as circumstances require. Amendments to publications may be initiated by emailing the GNZ Executive Officer. The change will be considered and either a draft amendment finalised for Executive approval and sign off or the Executive Officer will advise the person initiating the request for change why no change is made.

8.2 In the case of the Flight Training Programme, AC 2-01 sets out a specific procedure for maintenance and development prior to consideration by the Executive.

8.3 Once approved, amendments will be made to the master document as published on the GNZ website, and/or on the flight training programme site (on Moodle), as the case may be.

Note: ***The documents as published on these websites are the Controlled Documents. USE OF ANY COPY PLACES THE RESPONSIBILITY ON THE USER TO ENSURE THEY HAVE THE CURRENT DOCUMENT.***

9. List of Publications

A complete list of GNZ official publications and their source is contained in Appendix 1-A (pages 28-29).

ORGANISATION OF GNZ

1. Function of GNZ

The Fédération Aéronautique Internationale (FAI) governs air sports internationally. Within the FAI there are a number of air sport commissions – *FAI Gliding* (formerly known as the International Gliding Commission, IGC) provides the infrastructure and rules governing gliding World records, the badge and diploma system and international gliding competitions. Through the Royal New Zealand Aero Club, *FAI Gliding* recognises Gliding New Zealand as the controlling body for gliding in New Zealand.

2. Name

The Association is registered with the Incorporated Societies as GLIDING NEW ZEALAND. This name is used for all official correspondence with the CAA, Sport New Zealand, and other official bodies. Any use of the name the NEW ZEALAND GLIDING ASSOCIATION is deemed to refer to GLIDING NEW ZEALAND. Clubs, Groups and Organisations (otherwise referred to in this manual as "NZGA affiliates", "GNZ affiliates" or "affiliates") are affiliated to Gliding New Zealand.

3. Governing Body

The governing body of the Association is the Executive Committee, which consists of the President, the Vice-President, three elected members, the immediate Past President, the Executive Officer and the Treasurer. The Executive Committee meets at regular intervals to deal with the Association's business. The Executive Officer and the Treasurer have no voting rights.

4. Guiding Principles

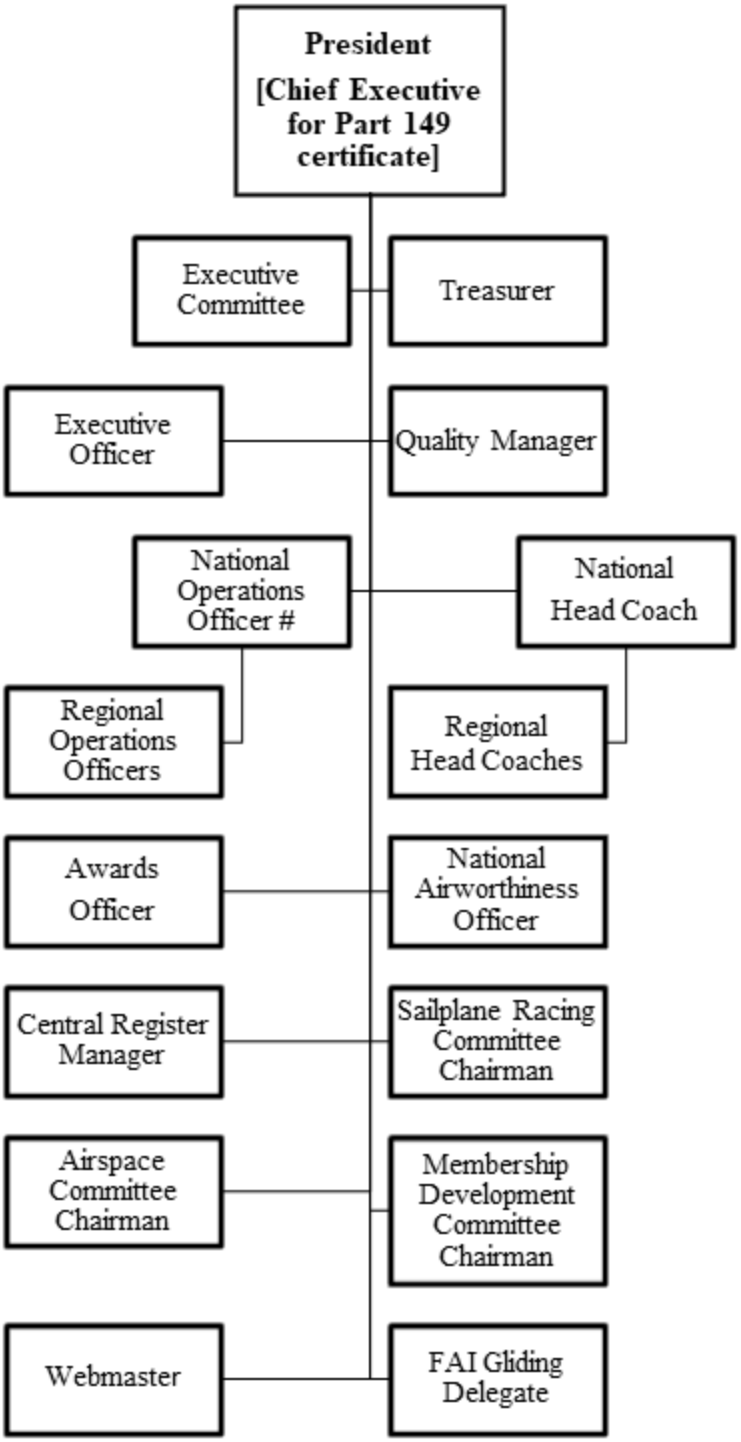
4.1 GNZ will ensure, through teamwork and professional attitudes that the gliding operations for which they are responsible are conducted safely and efficiently. GNZ will work within the following Guiding Principles:

SAFETY:	GNZ will not compromise on safety.
COMPLIANCE:	GNZ will comply with all relevant legislation.
QUALITY:	GNZ will continually improve the quality of gliding operations.
SPORT:	GNZ will value and recognise members' commitment to fun, adventure, camaraderie, and equal opportunity provided by participation in the sport of gliding.
INTEGRITY:	GNZ will maintain the highest possible ethical standards and sportsmanship.
COMMUNICATION:	GNZ will consult with its members and be responsive to their needs.

4.2 GNZ considers that the use of prohibited substances (doping) is fundamentally contrary to the spirit of sport and therefore seeks to comply with the policies of Drug Free Sport NZ (DFSNZ). In this respect, all GNZ clubs and their participating members are required to abide by the Sports Anti-Doping Rules (SADR) made by DFSNZ as amended from time to time.

5. Committees and Officers

5.1 The following organisation chart shows the relationships between the various committees and officers who handle the routine business associated with GNZ's activities:



Administers the issue of Glider Pilot and Glider Pilot Instructor Certificates and ratings under a delegation from the Director of Civil Aviation for that purpose.

Executive Committee
As the governing body, the Executive handles all administrative aspects and generally co-ordinates GNZ activities. Members are the GNZ President (chair), Vice President, three committee members, the Treasurer and the Executive Officer. The Immediate Past President is a member of the Executive for the year following his/her replacement as President. The Immediate Past President, Treasurer and Executive Officer do not have a vote.

Quality Manager
Manages the overall quality assurance processes covering activities undertaken by GNZ.

National Operations Officer
Along with the Regional Operations Officers forms the Operations Committee, which monitors the maintenance of operational standards of GNZ affiliates, including auditing, the training and rating of instructors and tow pilots, collecting and analysing accident and incident reports, and disseminating safety information. Issues Cross-Country Pilot certificates (XCP) certificates and Instructor Ratings under a delegation from the Director of Civil Aviation for that purpose.

National Head Coach
Along with the Regional Head Coaches, provides close support to pilots through mentoring, encouragement and goal setting to ensure all pilots who so desire transition from safe and competent local / circuit flyers to safe and competent cross-country flyers.

National Airworthiness Officer
Monitors the maintenance of airworthiness standards of GNZ affiliates, and the training and approval of engineers.

Awards Officer
Processes claims relating to FAI badges, diplomas and records; appoints FAI Official Observers; and administers the issue of Cross-Country Pilot (XCP) certificates on behalf of the National Operations Officer.

Central Register Manager
Maintains the electronic central membership database; which includes details of approvals, ratings, certificates, FAI awards and Official Observer appointments.

Medical Advisor
Provides the Executive and affiliates advice on medical issues related to gliding.

Airspace Committee
Deals with airspace issues, and provides liaison with the CAA and Airways Corporation on airspace matters, advocating for the protection of the interests of the gliding movement.

Sailplane Racing Committee
Promotes and supports competition flying within a set of rules it establishes and maintains for the fair and safe conduct of gliding championships in New Zealand. Also facilitates the election of a Selection Panel responsible for the selection and support of pilots representing New Zealand at international gliding championships.

Membership Development Committee
Facilitates implementation of good practice within clubs with respect to both flying operations and development of members generally. Creates opportunities to promote and market gliding using all appropriate media.

***FAI Gliding* Delegate and Alternate Delegate**
Represents the interests of GNZ at *FAI Gliding* (formerly IGC) meetings.

Webmaster
Develops and maintains the GNZ web site with the goal of promoting and encouraging gliding and facilitating the efficient management of GNZ activities.

5.2 The President, Vice-President, and members of the Executive Committee are elected at the GNZ Annual General Meeting.

5.3 The Executive Committee appoints all of the other committees and officers listed under paragraph 5.1 above.

5.4 Recommendations for membership of the Sailplane Racing Committee are decided by competition pilots at an annual meeting.

5.5 The Executive Officer, Treasurer, Operations Officers, National Airworthiness Officer, Awards Officer, Central Register Manager, and Quality Manager are central to the functioning of GNZ under its Part 149 certificate and are thus subject to contract.

5.6 Other Committees may be formed, or individuals given specific responsibilities, from time to time as required for special purposes.

5.7 For an up to date list of office holders and committees, refer to the GNZ web site at http://gliding.co.nz – navigate from the Home page **CONTACT > Executive Contacts.**

6 Delegated Authority from the Director of Civil Aviation

The GNZ President (who is the GNZ Chief Executive in CAR Part 149 terms) and the National Operations Officer both hold delegated authority from the Director of Civil Aviation to issue glider pilot certificates (XCP), glider instructor ratings, glider tow pilot instructor approvals, glider instructor trainer approvals, glider aerobatic instructor ratings, and Level 4 glider aerobatic flight ratings. This delegation is routinely exercised by the NOO, with the President as the alternate only in the case of temporary unavailability of the NOO. The Awards Officer administers the issue of XCP certificates on behalf of the NOO when so approved by the NOO (or the President when acting as alternate) in each case.

7. GNZ Central Register

7.1 GNZ maintains (electronically) a central register that facilitates various activities. In particular, to enable GNZ to fulfil its obligations as a Recreation Organisation certificated under CAR Part 149, certain individuals must register (see columns one and two of the table in Appendix 1-B on page 30). GNZ affiliated clubs and commercial operators need to be aware that allowing an unregistered pilot to fly as pilot in command in an insured glider that has an incident, has the potential to negate their insurance cover. Affiliates accepting new members must register them with GNZ within 14 days from the date of acceptance.

7.2 Form ADMIN 05 is used by the relevant affiliated organisation to register new members. Upon registration, a unique GNZ number is issued to the registrant. (Visiting foreign pilots use form ADMIN 06 instead – see page 52.)

7.3 Form ADMIN 05 is also used to notify changes of contact details of existing members, or to notify resignations or deaths.

7.4 An Online Membership System is available to affiliate administrators as an alternative (preferred) registration procedure. This system also allows individual registrants to *View* and *Edit* their personal contact details directly. The system is accessed from the GNZ home page at http://gliding.co.nz – navigate from the Home page **ABOUT > Online Membership.**

7.5 The Central Register is used to generate data for annual reports and affiliation fees. The list of members held on the Central Register on 31 October is used to generate invoices for affiliation fees. Affiliated organisations are responsible for ensuring that their membership data as at 31 October are the same as those held by GNZ to avoid any discrepancy in the charging of affiliation fees.

7.6 The Central Register is also used to record the issue of ratings, approvals, certificates, appointments and awards.

8. Record Keeping

8.1 The relevant officers maintain the records associated with the approvals, certificates and ratings listed in paragraph 6 above. To facilitate CAA audit, the relevant officer forwards all originals of completed application and approval documents to the Executive Officer on a regular basis, retaining working copies as necessary.

8.2 Individual pilots are responsible for maintaining their own Syllabus / Training Record sheets until they are completed and handed to their CFI for record keeping purposes. Individual pilots shall retain their own Medical Declaration / Certificate and provide a copy to their CFI for record keeping purposes.

8.3 Records of pilot training (including any completed Syllabus / Training Record sheets, Pilot Ratings and Biennial Flight Review sheets) and pilot Medical Declarations / Certificates are required to be held by each affiliate.

8.4 Records are to be maintained in secure storage at the operating base or another suitable location determined by the affiliate.

8.5 Records are to be retained for a period of at least three years from either the date of the last entry made on that record, or expiration of the Medical Declaration / Certificate.

8.6 Records are to be available for inspection by an officer of the CAA or the Operations Committee.

9. Fees for Certificates and FAI Badges and Diplomas

The current fees for XCP, Silver, Gold, Diamond badges and diplomas are detailed on the GNZ web site http://gliding.co.nz – navigate from the Home page **FOR PILOTS>FAI Badges/Records> Badge Flight Claiming.**

10. Communication with GNZ affiliates

10.1 Electronic communication channels are routinely used to disseminate official GNZ information and to provide a means by which all members of GNZ affiliates are made aware of safety information, operating techniques and other matters relating to gliding.

10.2 Such communication channels include GNZ web site news content, and emailed newsletters from the President, National Operations Officer, National Airworthiness Officer and other GNZ officers from time to time.

11. GNZ Affiliation Fee

11.1 GNZ affiliation fees are set at the Annual General Meeting and are payable in respect of those individuals detailed in columns one and three of the table in Appendix 1-B on page 30.

11.2 Members under the age of 26 who are in full-time study may have their affiliation fee waived.

11.3 Except for visiting foreign pilots wishing to fly gliders or powered gliders as pilot-in-command in NZ for a period of 3 months or less, the affiliation fee is payable annually and is adjusted as follows for the date of joining:

a) Those liable for the full annual fee are as listed on the Register on 31 October each year.
b) Those joining between 1 November and 31 January are also liable for the full annual fee.
c) Those joining between 1 February and 30 April are liable for 50% of the full annual fee.
d) Those joining between 1 May and 30 June are liable for 25% of the full annual fee.

11.4 The fees payable in respect of visiting foreign pilots wishing to fly gliders or powered gliders as pilot-in-command in NZ for a period of 3 months or less are as follows:

a) If flying under the supervision of a GNZ Club affiliate, $60.00 (GST inclusive).
b) If flying under the supervision of a GNZ Commercial affiliate, the affiliation fee is covered by that affiliate's charges to the pilot. (Commercial affiliates are charged a bulk affiliation fee.)

11.5 Tasman Trophy Levy. The costs associated with providing a competitive glider for the visiting Australian pilot competing in the Tasman Trophy event is paid by GNZ and funded from a levy across total membership as a component of the GNZ affiliation fee

11.6 Members Communication levy. The costs associated with providing routine communication with GNZ affiliates (paragraph 10 above) are funded from a specific levy collected with the GNZ affiliation fee. This levy is set at the Annual General Meeting in conjunction with the affiliation fees.

12. Aircraft Fee (levy)

An aircraft fee is set at the Annual General Meeting and is payable in respect of aircraft with nationality and registration marks ZK-G-- on the NZ Register at 31 October each year. Aircraft on the CAA published list of inoperable aircraft with deferred Participation Levy as at 31 October each year are exempt from this fee, provided it remains on that list until at least the following 30 April.

QUALITY ASSURANCE

1. Quality Manager

The GNZ Quality Manager:

- Ensures that audits of GNZ practices are carried out on a planned basis in accordance with the internal audit programme.
- Ensures that internal audits include examination of processes, interviews with personnel, reviews of records, documentation of audit findings and corrective actions.
- Receives, reviews, and keeps copies of all internal audit reports and advice on progress with agreed corrective actions from the National Operations Officer and the National Airworthiness Officer.
- Advises the GNZ President and other relevant persons of any corrective action required arising from external audit findings.
- Ensures that follow up audits are conducted to review the effectiveness of any corrective action taken.
- Assists the Executive Officer as required during CAA audits of GNZ as a Part 149 certificated organisation.

2. Internal Audit Programme

2.1 Every GNZ affiliate is subject to a general operations audit about every two years by the relevant ROO or the NOO. Affiliates must not rely entirely on the ROO or NOO to arrange audits, as it is basically their responsibility to ensure they meet this requirement.

2.2 An overview of Quality Assurance practices and procedures including details of the Audit Programme is contained in GNZ Advisory Circular AC 1-01 Quality Management.

3. Changes to GNZ Procedures or Documentation

3.1 All members of affiliates are encouraged to submit proposals for changes to GNZ procedures or documentation whenever deemed necessary or desirable.

3.2 The GNZ Executive Officer is responsible for maintaining a register and processing any requests for changes to GNZ procedures or documentation, whether they arise as a result of 3.1 above or from internal or external audit findings. All such changes must be approved by the Executive.

FINANCES, LOANS AND GRANTS

1. Association Finances

The Association's chief source of income is from subscriptions, which are set each year by the Annual General Meeting. Subscriptions are payable in respect of all members appearing on the GNZ Central Register as at 31 October each year.

2. GNZ Loans

2.1 Through the GNZ Umbrella Trust, GNZ has funds that may be provided to GNZ affiliates in the form of loans. Application for a loan is made on Form ADMIN 02.

2.2 The rates of interest, term and amount of loan will be determined by the trustees of the GNZ Umbrella Trust. Generally, preference will be given to requests for loans to upgrade the assets of GNZ affiliates.

3. Grants for Training

3.1 Funds may be made available to GNZ affiliates to assist their engineers to attend relevant training courses.

3.2 The following criteria will normally apply:

(a) The funds are provided to assist with the training of volunteer GNZ affiliates engineers only, and are for the purpose of recompensing out-of-pocket expenses, not loss of earnings.

(b) Any GNZ affiliate wishing to obtain funds should contact GNZ prior to the course commencing.

(c) Payment will only be made where the GNZ affiliate shows that its member attended and passed the course, and that the affiliate contributed to the expenses incurred.

(d) The course must be one that is approved by GNZ.

(e) Availability of funds will be subject to GNZ budget provisions.

3.3 Funds may also be available to assist GNZ Officers to attend training courses relevant to their role and responsibilities within GNZ. Application for such funding should be made direct to the GNZ Executive.

AWARDS

1. Badges and Certificates

1.1 A Solo Pilot Certificate that celebrates a first solo in a glider and completion of the Solo Pilot Training Syllabus, and a Soaring Pilot Certificate that celebrates completion of the Soaring Pilot Certificate Training Syllabus, are issued by affiliates.

1.2 Affiliate CFIs may register Solo Pilot and Soaring Pilot Certificate holders in the central Awards database.

1.3 Affiliates may obtain Solo Pilot and Soaring Pilot certificates and badges from GNZ. (Contact the Central Register Manager.)

1.4 The issue of a GNZ Cross-Country Pilot (XCP) Certificate, which recognises completion of the XCP training syllabus, is administered by the GNZ Awards Officer. Form OPS 03 is used to process the application for issue, and a register of recipients is kept in the central Awards database. Pilots qualified to fly gliders in a foreign country wishing to have their qualifications recognised as equivalent to the GNZ XCP use form OPS 06.

1.5 An FAI Silver Badge and Certificate, which celebrates completion of the FAI Silver Badge soaring requirements, is issued by the GNZ Awards Officer. Form OPS 04 is used to process the application for issue and a register of recipients is kept in the central Awards database.

1.6 An FAI Gold Badge and Certificate, which celebrates completion of the FAI Gold Badge soaring requirements, is issued by the GNZ Awards Officer. Form OPS 04 is used to process the application for issue and a register of recipients is kept in the central Awards database.

1.7 An FAI Diamond Badge and Certificate, which celebrates completion of the FAI Diamond Badge soaring requirements, is issued by the GNZ Awards Officer. Form OPS 04 is used to process the application for issue and a register of recipients is kept in the central Awards database.

2. Timely Application for Badges and Certificates

2.1 Application should be made to the Awards Officer as soon as possible after the flight, using the appropriate GNZ form. (Experience has shown that long delays make any documentation shortfalls much more difficult to resolve.) See paragraph 9 on page 19 for the current scale of fees. The correct payment must accompany the application or be prior paid by internet banking to GNZ. Claims will only be processed if the pilot is currently a financial flying member of a GNZ affiliate.

2.2 Individual “legs” for Silver or Gold badges may be claimed separately and will be held in the Award Officer’s records pending completion of all legs.

3. Application for Records

3.1 Preliminary notice of a claim for a World record must be lodged with the Awards Officer within 48 hours of the completion of the flight. Such notification may be via email or telephone, and need only include brief details of the performance claimed, including date and time. Only New Zealand citizens or residents are eligible to attain New Zealand records.

3.2 The forms required by the FAI for record applications can be obtained from the FAI website at https://www.fai.org/igc-documents. Record applications cannot be accepted unless on the correct forms.

3.3 Full documentation, in accordance with details in the FAI Sporting Code, must be submitted within 30 days.

3.4 For New Zealand records, all FAI classes (Open, 15m, & World), categories (General & Feminine), and types are recognised, with the addition of speed records for the 200km and 400km triangle, and 100km, 200km, 300km and 400km out-and-return. A speed record will be certificated for the record distance immediately less than the official distance of the flight. Any record or records may be claimed for which the requirements are met.

4. Official Observers

4.1 An Official Observer must certify all documentation for record flights and FAI award claims. Official Observers should note that claimants are required to provide a written declaration that there were no breaches of airspace, oxygen or daylight rules during the flight in question.

4.2 The GNZ Awards Officer is responsible for the appointment of Official Observers and maintains a register of appointments. Contest Directors of competitions sanctioned by GNZ are automatically deemed to be Official Observers for badge or record flights undertaken during the competition.

4.3 Application for appointment as an Official Observer should be made on form OPS 05, and must be supported by a recommendation from the CFI of the GNZ affiliate. A test paper is available from the Awards Officer to assist in this process.

4.4 From time to time, as significant alterations to the Sporting Code occur, the register may be cancelled and a new one created.

4.5 In the case of World record claims, the Official Observer must be approved in writing by the GNZ Awards Officer, as a Senior Official Observer for this role. Previous satisfactory experience as an Official Observer for FAI badges or New Zealand records where flight recorders were used will be required before Senior Official Observer approval is given.

5 Sporting Licences

5.1 For entry into a First Category Event, such as a World Championship, or for a Continental or World record the FAI requires pilots to hold a Sporting Licence issued by the National Airsport Control (NAC). In New Zealand this is the Royal New Zealand Aero Club (RNZAC) Inc.

5.2 Pilots requiring a Sporting Licence issued by the RNZAC should apply online at the following: https://flyingnz.co.nz/fai.html

5.3 Pilots should note that their Sporting Licence will not be recognised as valid until it has been entered into the FAI central database.

5.4 A Sporting Licence is not required for NZ contests or for NZ records.

6. Licences for Use Overseas

Some countries require a glider pilot to hold a pilot licence issued by a State regulatory authority before permitting that pilot to fly as pilot-in-command in their country; that is a PPL(G) or CPL(G) issued by CAA. These licences are issued by the CAA under CAR Part 61. The GNZ Executive Officer may be consulted for guidance.

7. Annual Awards and Trophies

7.1 The following awards are available to be made annually by the GNZ Executive Committee:

Angus Rose Bowl
Presented to the NZGA by Mr. Bill Angus, one of the original pioneers in aviation in New Zealand, the Angus Rose Bowl is awarded in recognition of outstanding services to the sport of gliding in this country.

Friendship Cup
Awarded for outstanding contribution to the gliding movement during the preceding year.

C W F Hamilton Trophy
Awarded to a New Zealander operating in New Zealand for the most meritorious flight that is a New Zealand gliding record. The year covered is GNZ's financial year.

Air New Zealand Soaring Award
This trophy is awarded to the pilot who has shown the most significant improvement in their personal standard of competition or record flying during the year.

7.2 The following awards are made annually, and are determined directly by specific performances:

Rothmans Challenge Gold Cup
This trophy is awarded to the New Zealander operating in New Zealand who has attained the highest handicapped speed over a FAI 28%, 300 km triangular course. Current GNZ handicaps will be used and the general conditions and documentation requirements for record flights under the FAI Sporting Code apply.

Buckland Soaring Award
The Buckland Soaring Award is awarded to the highest scoring New Zealand resident in the There are two divisions; one for soaring flights commencing in the North Island and the other for soaring flights commencing in the South Island. The winning pilots stand down for the following two seasons. The rules for this award may be found on the GNZ web site at http://gliding.co.nz/pilots/sailplane-racing/other-competitions/.

Air New Zealand Cross Country Championship
This is a decentralised competition aimed at encouraging cross country flying from club sites, particularly by pilots new to cross country flying. It is a distance event extending over the season and is run in two divisions; one for flights originating in the North Island and one for flights originating in the South Island. Any NZ resident glider pilot with a GNZ XCP certificate may enter the contest provided that, on the first day of the contest, no more than 10 years have elapsed since their XCP was awarded and they have not flown a ratified (or subsequently ratified) Gold distance flight. The rules for this championship may be found on the GNZ web site at http://gliding.co.nz/pilots/sailplane-racing/other-competitions/.

8. Gliding New Zealand First Competition Award

This award is intended to encourage and support early cross-country pilots in their first competition. It is awarded to pilots on achievement of a Silver distance flight, provided they have not previously flown in a gliding competition. The award takes the form of a rebate of the entry fee for a New Zealand regional gliding championships, plus a contribution towards competition launch fees at that event.

COMPETITIONS

1. Gliding Competitions

1.1 GNZ encourages participation in the following forms of gliding competition:

(a) International Gliding Championships

(b) Tasman Gliding Championships

(c) NZ National Gliding Championships

(d) Northern, Central and South Island Regional Gliding Championships

(e) Cross-country Championships

(f) Club Competitions

1.2 The GNZ Executive approves the location, date and host organisation for National and Regional championships. These details are finalised at GNZ's Annual General meeting.

1.3 The Sailplane Racing Committee (SRC) is responsible to the GNZ Executive for the promotion, support and encouragement of competition flying of all types and at all levels. In so doing, the SRC facilitates the raising of competitive skills and develops and maintains rules, scoring systems and glider handicaps for GNZ national and regional competitions. The SRC is responsible for the oversight of management of such competitions. (However, the safety oversight of flying operations at all times remains the responsibility of the Operations Committee.)

1.4 Competition Rules and glider handicaps can be found on the GNZ web site. Advisory Circular AC 2-10 Competitions contains further information.

1.5 For GNZ policy on anti-match-fixing and sport betting, refer to GNZ AC1-06.

2. Selection Procedure for International Representatives

The following procedure shall be used for selecting pilots and team captains to represent New Zealand at FAI Class 1 international events:

2.1 Selections shall be made each calendar year by a panel consisting of not less than three but no more than four members appointed at the Pilots' Meeting held in conjunction with the GNZ AGM. Ideally, the panel will consist of one member from each of the North, Central and South regions, with Contest Directors from the previous three seasons considered ideal candidates. The elected panel will appoint its own chairperson.

2.2 No person may sit on the selection panel if they are in contention for selection for an upcoming international event covered by this procedure.

2.3 It is the responsibility of the selection panel to:

(a) Select suitable pilots to represent New Zealand at international contests according to the selection requirements set out in paragraph 2.9 below, and

(b) Establish an order of preference for the selected representatives according to paragraph 2.10 below.

2.4 Pilots wishing to participate in upcoming international competitions must register an expression of interest not later than 18 months prior to the start of the relevant international competition. Expressions of interest shall be registered with the Chairperson of the Selection Panel (2.1 above) and must include:

(a) A résumé of prior experience (total hours, competitions flown with placings etc), and

(b) A Training and Performance Plan setting out the pilot's proposed preparation for the competition in which he or she wishes to participate.

2.5 Late expressions of interest will be considered only after official selection has been completed and it has been established that competition positions remain unfilled.

2.6 The Chairperson of the Selection Panel shall compile and forward to the other members of the panel expressions of interest for consideration before the conclusion of the relevant New Zealand National Championships or relevant overseas competition occurring in that selection year.

2.7 The selection panel shall return an official list of selected representatives, in order of preference, to the GNZ Executive Committee not more than one month after the conclusion of the relevant New Zealand National Championships or relevant overseas competition. This list should also include, in order of priority, recommendations for funding support or grants to pilots subject to confirmation of selection. Such funding may not necessarily be allocated in the same order of preference as team selection.

2.8 Selected pilots shall, in the order of preference as determined by the selection panel, decide on the international competition(s) in which they wish to compete, subject to available spaces, and return their decisions to the GNZ Executive Officer not more than 14 days after the official list of selected representatives has been published.

2.9 In order to be selected to represent New Zealand at international competitions, prospective pilots must, at the time of selection:

(a) Hold New Zealand Citizenship, or Permanent New Zealand Residency, and

(b) Be a member of a club or organisation that is affiliated to GNZ, and

(c) Have flown in the previous two New Zealand National Championships in the class in which they wish to represent New Zealand (the scores from which will be aggregated for selection purposes), or placed within the top 10 of an acceptable overseas national or international competition within the previous two years, and

(d) Be considered by the selection panel to have demonstrated over time the attributes required to meet the GNZ Code of Conduct for pilots selected to represent New Zealand.

2.10 In establishing the order of preference of selected pilots to represent New Zealand at international competitions, the selection panel shall consider:

(a) Performances at National and/or international competitions in the previous two years, and

(b) The extent of the pilots' commitment to a squad-based performance training programme designed to achieve success at international competitions, and

(c) The potential of the pilots to succeed at future international competitions, and

(d) Attributes, demonstrated over time, that indicate the capacity and preparedness of the pilots to function effectively and appropriately as part of a New Zealand team.

2.11 Where possible, the GNZ Umbrella Trust will indicate to prospective pilots, through the Chairperson of the Selection Panel, the level of funding expected to be available to selected representatives prior to the selection process occurring.

2.12 Selected pilots will be required to sign their agreement to the GNZ Code of Conduct and the associated policy of Drug Free Sport NZ.

2.13 Only those pilots selected as part of a selected team may be considered to be representing New Zealand at international competitions.

PUBLICATIONS AND FORMS

1. GNZ Publications

The following official GNZ publications are downloadable from the GNZ website at http://gliding.co.nz – navigate from the Home page **ABOUT >**

ABOUT >About Gliding New Zealand for GNZ Exposition and GNZ constitutional Rules

ABOUT >Admin & Forms>MOAP for GNZ MOAP (this manual)

ABOUT >Admin & Forms>Advisory Circulars for GNZ Advisory Circulars, as follows:

AC No.	Title
1-01	Quality Management
1-02	Club Rules
1-03	Anti-Doping Policy
1-04	Trial Flights
1-05	Emergency Plans
1-06	Anti-Match-Fixing & Sports Betting Policy
2-01	Operations Officers
2-02	CFI & Instructor Panel
2-03	Pilot Examinations
2-04	Instructor Privileges & Currency
2-05	Biennial Flight Reviews
2-06	Aerobatic Flight in Gliders
2-08	Accidents & Incidents
2-09	Manual of Glider Tow Pilot Training
2-10	Competitions
2-11	Radio Procedures
2-12	Air Training Corps Gliding Courses
2-13	Mountain & Ridge Soaring Safety Principles
3-01	Glider Daily Inspection
3-02	Aero Tow Ropes
3-03	Glider Tow Releases
3-04	Winch & Auto Launch Cable Configuration
3-07	Carriage and Use of Oxygen
3-08	Gelcoat refinishing
3-14	Requirements for Acceptable Technical Data
3-15	Operator Responsibility for Maintenance
3-16	Notes on use of Tech 22
3-17	Compass Installation & Maintenance
3-18	Glider Weight & Balance

ABOUT >Admin & Forms>Admin Forms for GNZ administration forms:

No.	Title
ADMIN 01	Application for Club Affiliation
ADMIN 02	Questionnaire for Loan Application
ADMIN 04	Application for Affiliation as Annual Group
ADMIN 05	GNZ Registration Form
ADMIN 06	Visiting Foreign Pilot Registration
ADMIN 07	Questionnaire for Grant Application

ABOUT >Admin & Forms >Operations Forms for GNZ operations forms:

No.	Title
OPS 01	Medical Certificate and Declaration
OPS 02	XCP Exam Candidates Answer Sheet
OPS 03	Application for XCP Certificate
OPS 04	Application for Silver, Gold or Diamond Badge Legs
OPS 05	Application for Appointment as Official Observer
OPS 06	Validation of Foreign Qualifications for GNZ XCP
OPS 07	Application for Instructor Rating
OPS 08	Competency Review – New & Intermediate Instructors
OPS 09	Competency Review – Advanced & Senior Instructors
OPS 10	Incident Report
OPS 11	Flight Review
OPS 13	Application for Tow Pilot Instructor Approval
OPS 14	Notification of Issue of Glider Tow Pilot Rating
OPS 15	General Operations Audit Report

Forms in the **TECH** series (airworthiness), and their availability, are listed on page 115.

To avoid out of date forms being used, affiliates should only print sufficient stocks to meet their immediate needs.

The following official GNZ publications are available in hard-copy from the *Gliding International Book Store* email **office@glidinginternational.com**

Instructors' Field Handbook
Glider Pilot's Log Book
Daily Inspection & Tech-Log booklet (TECH 19)

2. CAA Publications

The following official publications are relevant to gliding and are available on the CAA website at www.caa.govt.nz

Civil Aviation Acts and Regulations
Good Aviation Practice Booklets (GAP)
Civil Aviation Rules
Advisory Circulars
Part 39 Airworthiness Directives.

REGISTRATION & AFFILIATION

1. Registration

Registration is required in respect of those individuals detailed in columns one and two of the table below.

2. Affiliation fees

Affiliation fees are payable in respect of those individuals detailed in columns one and three of the table below. See section 1-3 paragraph 11 for fees (page 20). Individuals pay their fees to the GNZ affiliate that they are a member of. GNZ invoices affiliates.

	Registration Required?	**Affiliation Fees Applicable?**
Flying members[1] of GNZ affiliates (both club and commercial)	Yes	Yes
Visiting foreign pilots[2]	Yes[3]	Yes[4]
Tow pilots flying club-operated tow planes and PPL tow pilots flying tow planes operated for hire and reward	Yes	Yes
Tow pilot Instructors/Examiners	Yes	Yes
Winch and/or auto launch drivers	Yes	Yes
GNZ Engineer Approval holders (non-LAME)[5]	Yes	Yes
GNZ Engineer Approval holders (practising LAME)[6]	Yes	No
ATC Cadets[7]	No	No
ATC Officers flying as pilot-in-command[8]	Yes	Yes
Non-flying members of GNZ affiliates (eg social members)	Optional	No

[1] 'Flying member' includes individuals under training, not yet solo, but excluding those undertaking a training course of not more than seven days' duration; or those who have not completed more than six trial flights in the preceding six months.

[2] Defined as non-NZ residents qualified to fly gliders or powered gliders in their home country and wishing to fly gliders or powered gliders as pilot-in-command in NZ for a limited period.

[3] See also Section 2-6, Foreign Gliders and Pilots.

[4] See Section 1-3, paragraph 11.4, for fees applying to visiting foreign pilots flying in NZ for 3 months or less.

[5] Registration requirement is covered by the issue of GNZ Engineer Approval. If the Approval is being exercised as part of the activities of a Commercial Member operating a glider maintenance facility then the individual's affiliation fee is covered by the Commercial Member's fee.

[6] Registration requirement is covered by the issue of GNZ Engineer Approval.

[7] Not yet awarded an A badge.

[8] Also applies to ATC cadets awarded an A badge.

OPERATIONAL REQUIREMENTS

1. Introduction

1.1 Pursuant to GNZ's Aviation Recreation Organisation Certificate issued by the Director under CAR Part 149, Part 2 of this Manual prescribes and expands on the operational standards and procedures required by the CAA and GNZ for the operation of gliders and powered gliders in New Zealand.

1.2 This Part 2 applies equally to a CAR Part 103 Class 1 or Class 2 microlight aircraft that has the performance characteristics of a glider when not operating under power. The words "glider" and "powered glider" in this Part 2 must be taken to include such aircraft.

2. Civil Aviation Rules

2.1 The Civil Aviation Rules (CAR), organised into Parts covering specific aviation activities, are published under the authority of the Civil Aviation Act (1990) and apply to all aircraft in or over New Zealand territory. Key Civil Aviation Rules affecting gliding are:

a) Part 12 – Accidents, incidents, and statistics
Details our responsibilities for reporting incidents and accidents.

b) Part 19 – Transition rules
Preserves the pre April 1997 rules regarding glider pilot and engineer qualifications (CASO 17 and NZCAR Section J)

c) Part 21 – Certification of products and parts
Details requirements for Airworthiness Certificates and aircraft modifications

d) Part 39 – Airworthiness directives
Lists mandatory inspections and/or modifications/repairs to aircraft arising from service experience

e) Part 43 – General maintenance rules
Details many of our glider maintenance procedures.

f) Part 47 – Aircraft registration and marking
Details the rules for registration, change of ownership etc

g) Part 61 – Pilot licences and ratings
Gives details for CAA issued licences eg. PPL(G) & CPL(G)

h) Part 91 – General operating and flight rules
Details numerous general operating rules that glider pilots must comply with.

i) Part 103 – Microlight Aircraft – Operating Rules
Prescribes operating rules for microlight aircraft that are additional to, or exceptions from Part 91; plus their airworthiness and maintenance requirements.

j) Part 104 – Gliders – Operating Rules
Prescribes operating rules for gliders that are additional to, or exceptions from Part 91 and 43.

k) Part 149 – Aviation recreation organisations – certification
Details how GNZ is certificated by CAA to administer gliding activities.

2.2 From time to time the various CAR Parts are amended and new CAR Parts are promulgated as necessary. GNZ affiliates are required to have ready access to the appropriate CAR Parts and to ensure that their members are conversant with those Parts, particularly those listed above. Access to the CAA website www.caa.govt.nz is deemed to meet this requirement.

3. Part 104

The objective of Part 104 is to specify the additions, and exceptions, to Parts 43 and 91 for the operation of gliders and powered gliders. The following sections of Part 104, applying to the operation of gliders and powered gliders, are reproduced here with a brief interpretation of their relevance in *italics*:

104.7 Test Flights

(a) Notwithstanding 91.101(c)(4), the holder of a glider pilot certificate and an applicable type rating may act as pilot-in-command of a glider that is operated in accordance with rule 91.101(c) for the purpose of demonstrating the eligibility of that glider for the issue, renewal, or reinstatement of an airworthiness certificate.

(b) Notwithstanding 91.613(a)(1), the holder of a glider pilot certificate and an applicable type rating may perform an operational flight check of a glider under rule 91.613 if the glider requires an operational flight check.

This refers to test flying for issue or renewal of an Airworthiness Certificate or after maintenance that might have affected flight characteristics. It allows the holder of a glider pilot certificate issued by GNZ to do the test flying instead of a Part 61 licence holder.

104.9 Flight Manuals

Notwithstanding 91.111(2), a person may operate a glider without carrying a flight manual in the aircraft if-

(1) the flight manual is available to the pilot for pre-flight planning; and
(2) cockpit decals provide all the reference information necessary for a pilot to safely operate the glider.

This allows a glider to be flown without the Flight Manual on board provided the above conditions are satisfied.

104.11 Simulated Instrument Flight

Notwithstanding 91.125(a)(1), the holder a glider pilot certificate may act as a safety pilot in a glider for the purpose of simulated instrument flight.

This recognises that most glider pilots do not hold CAA issued pilot licences.

104.13 Ground Signal

If a ground signal is used to indicate that gliding operations are taking place, that signal shall consist of a large white arrow pointing in the direction of take-off and landing.

The gliding arrow is now optional. Further details on its use are in section 2-9 (page 63).

104.51 Right of Way Rules

(a) Notwithstanding 91.229(b), the pilot of a glider soaring on a ridge, where the ridge is to the right of the glider, is not required to turn right when approaching another glider head on.

This caters for gliders meeting head on when ridge soaring.

(b) Notwithstanding 91.229(d), the pilot of a glider overtaking another glider soaring on a ridge shall pass on the ridge side of the glider being overtaken.

This caters for gliders overtaking others when ridge soaring.

(c) Notwithstanding 91.229(f), where two gliders are on final landing approach, the pilot of the higher performance glider shall give way to the lower performance glider.

This recognises that different levels of performance of gliders can be used to provide separation within the circuit.

104.53 Instrument Meteorological Conditions

Notwithstanding 91.301, the pilot of a glider may fly in IMC, without complying with Subpart F of Part 91, if the flight is conducted within-

(1) a restricted area designated for cloud flying; or
(2) Class G airspace and the pilot confirms with the appropriate ATS unit at intervals not exceeding 15 minutes that there is no known IFR traffic in or near the proposed area of cloud flying.

This details when a glider may fly in IMC without having to satisfy more restrictive requirements.

104.55 Clearance Below Cloud

Notwithstanding 91.301(a)(2), the pilot of a glider, above an altitude of 3,000 feet and above a height of 1,000 feet, but below an altitude of 11,000 feet, shall fly no closer than 500 feet below cloud within Class E or G airspace.

This allows a glider to fly closer to cloud than the 1000 ft otherwise permitted in these circumstances.

104.57 Fuel Requirements

The requirements of 91.305(a) shall not apply to the pilot of a glider.

This recognises that gliders don't run on fuel!

104.59 Minimum Height

Notwithstanding 91.311(a)(2), the pilot of a glider may operate the glider below a height of 500 feet above the surface -

(1) for ridge soaring, if the flight does not create a hazard to a person or property on the ground; or
(2) if a gliding instructor is conducting launch failure training.

This allows gliders to soar in ridge lift and to practise low-level launch failures.

104.61 VFR Cruising Altitude and Flight Level

Notwithstanding 91.313, the pilot of a glider is not required to maintain the cruising altitude or flight level for their magnetic track.

This recognises the fact that gliders do not fly cross-country at set altitudes.

OPERATIONAL RESPONSIBILITIES

1. Overview

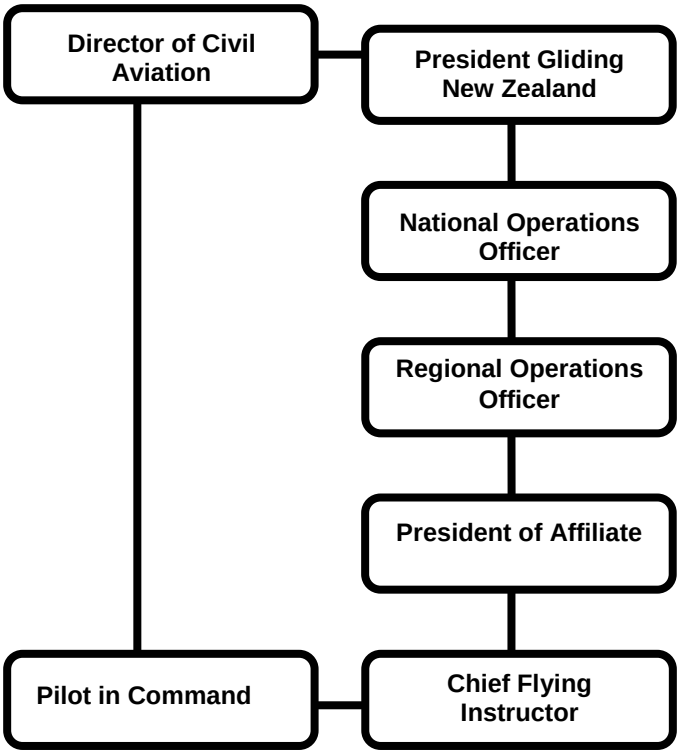
1.1 As the Chief Executive in accordance with GNZ's Part 149 Exposition, the President of GNZ is responsible to the Director of Civil Aviation for the conduct of gliding operations.

1.2 GNZ acknowledges that the gliding movement is based on the principle that its affiliates are responsible bodies. Accordingly, it is GNZ policy to expect individual GNZ affiliates to take responsibility for their gliding operations and to conduct such operations with minimum supervision.

1.3 GNZ supervision will be in the form of advice and where necessary, control to the extent necessary to ensure safety and regulatory compliance.

1.4 Where safety is compromised or non-compliance with relevant rules and procedures is not corrected to the satisfaction of the President of GNZ, the President may take action up to and including expelling an affiliate from GNZ in accordance with GNZ's constitution. Any such action may include reporting the affiliate to the CAA for their action.

1.5 Within GNZ, there are 6 levels of operational responsibility. The individual pilot-in-command of an aircraft involved in gliding operations (this means both gliders and tow planes) is responsible to their CFI and may be held directly responsible to the Director CAA for regulatory compliance. The CFI is responsible to their affiliate President who in turn is responsible to the Regional Operations Officer (ROO). The ROO is responsible to the National Operations Officer (NOO) who in turn is responsible to the President of GNZ. This diagram depicts these lines of operational responsibility.



2. Operational Responsibilities of the Individual Pilot-in-Command (PiC)

2.1 Responsibility for the safety of the aircraft and for compliance with NZ Civil Aviation Rules, Regulations and associated orders, Notams etc, rests with the Pilot in Command. The PiC shall be responsible for the aircraft from the time they commence preparation for flight to the time they secure the aircraft after flight.

2.2 The PiC shall ensure that, at all times, the aircraft is flown in strict accordance with the established procedures, techniques and rules of GNZ and the affiliate under which the operations are being conducted.

2.3 The PiC shall ensure they are appropriately qualified to conduct the operation being undertaken and that they have satisfactorily completed a Biennial Flight Review within the preceding 24 months and had their log book endorsed to this effect.

2.4 The PiC shall ensure the aircraft is airworthy prior to flight and that any event that renders it unairworthy for further flight is reported to an appropriate person. Airworthiness documentation including a current Airworthiness Certificate, a valid Tech Log / DI Book, Aircraft Radio Station Approval (Form 2129), Weight & Balance Data (Form 2173), and Flight Manual are to be carried in the aircraft. In certain circumstances, a glider may be flown without a Flight Manual on board – see the reference to CAR 104.9 on page 32.

2.5 The PiC is responsible for the safety and security of an aircraft when operated away from the home base. ie after an out landing in a glider until it is returned to its usual place of storage.

2.6 The PiC is responsible for ensuring that all necessary documents, including current maps relevant to the flight to be undertaken, are available in the aircraft.

2.7 The PiC shall at all times plan and conduct the flight with safety as the paramount factor and with achievement of sporting goals as a desirable accomplishment.

2.8 The PiC is responsible for any prohibited substance found in their body regardless of how it got there.

3. Operational Responsibilities and Functions of GNZ Affiliates

3.1 Each affiliate shall appoint a Chief Flying Instructor (CFI). The affiliate is responsible for advising any change of CFI to the Regional Operations Officer (ROO).

3.2 The CFI is responsible to the President of the affiliate for the conduct and supervision of all gliding operations conducted under the auspices of the affiliate.

3.3 All of the active GNZ gliding instructors in the affiliate should be members of an Instructors' Panel chaired by the CFI. Members of the panel are responsible to the CFI for the provision of instruction and supervision of gliding operations conducted under the auspices of the affiliate.

3.4 In cases where more than one affiliate is involved in a joint flying “camp” away from base, the relevant Regional Operations Officer (ROO) should be informed and clear lines of responsibility established for all flying operations.

3.5 Air Training Corps gliding courses are a special case requiring liaison between the relevant Regional Operations Officer (ROO) and the NZ Cadet Forces National Aviation Officer. Typically, these courses are concentrated over several days and involve instructors, tow-pilots and aircraft from more than one affiliate. A common understanding of responsibilities for course flying needs to be established – GNZ Advisory Circular AC-12, Air Training Corps Gliding Courses, provides guidance in this respect.

4. Operational Responsibilities at the Regional Level

4.1 NZ is divided into 3 geographic regions as areas of responsibility:

(a) Northern Area – all that area of the North Island north of a line joining New Plymouth to Turangi to Tolaga Bay.

(b) Central Area – all that area of the North Island south of a line joining New Plymouth to Turangi to Tolaga Bay.

(c) Southern Area – all of the South Island and Stewart Island.

4.2 The GNZ Executive appoints a Regional Operations Officer (ROO) for each region. The ROO's are members of the Operations Committee, which is chaired by the National Operations Officer and is responsible for the maintenance of operational standards of GNZ affiliates.

4.3 Information on the appointment of ROOs and their Terms of Reference is contained in the GNZ Advisory Circular AC 2-01 Operations Officers.

5. Responsibilities and Duties of the National Operations Officer

5.1 The GNZ Executive appoints a National Operations Officer (NOO). The NOO heads the Operations Committee and has the following responsibilities:

- Ensures pilot training and qualification is conducted in accordance with the GNZ Instructors' Manual and the MOAP.
- Ensures that routine audits of affiliate operational activities are conducted and that copies of audit reports are forwarded to the Quality Manager.
- Maintains a register of agreed corrective actions for all GNZ affiliates, monitors their execution, and advises the Quality Manager accordingly.
- Administers the issue of glider instructor ratings and maintains records of such ratings.
- Administers the issue of glider tow pilot instructor approvals and maintains records of such approvals.
- Administers the issue of glider low level aerobatic approvals and maintains records of such approvals.
- Regularly updates the central database for the issue of all ratings and approvals.
- Regularly forwards the originals of completed rating and approval application documents to the Executive Officer.
- Collects and analyses gliding incident and accident reports and disseminates safety information.

5.2 Information on the appointment of the NOO and his/her Terms of Reference is contained in the GNZ Advisory Circular AC 2-01 Operations Officers.

PILOT QUALIFICATIONS

1. Medical Requirements

1.1 No person may act as pilot-in-command of a glider or powered glider unless that person complies with the medical requirements detailed in Appendix 2-A (page 75).

1.2 An importance aspect of the medical requirements is that any change of health or existence of a previously undetected medical condition that may affect the validity of the required medical certificate or declaration must be declared to the relevant CFI. In such cases, the holder must cease acting as pilot-in-command until a medical practitioner confirms that the certificate is not in fact affected and the CFI so advised.

2. Pilot-in-Command Requirements (Ref CAR 104.5)

2.1 A pilot of a glider must –

(a) Hold a current glider pilot certificate, or a current PPL(G) or CPL(G); and

(b) Be at least 16 years of age or be individually authorised for each flight by a category A or B gliding instructor in accordance with Appendix 2-B (page 76); and

(c) Comply with the privileges and limitations of the glider pilot certificate or pilot licence and any applicable rating, and with this MOAP.

2.2 Notwithstanding 2.1 above, a person may act as a pilot in command of a glider if under the direct supervision of a gliding instructor. In this context, direct supervision means that the instructor is present at the airfield of takeoff, conducts a pre-flight briefing including guidance on the areas through which the flight is to be conducted, and monitors the progress of the flight (either from the ground or from another aircraft). Category 'C' instructors carrying out such direct supervision must be authorised to do so by the CFI.

3. Logbooks and Logbook Endorsements

3.1 All flight time in gliders and powered gliders is to be entered in a permanent logbook, noting date of flight, glider type and registration, place of launch, time in air, and using the following notation for launch method and crew capacity:

A – aero-tow **C** – catapult **M** – auto-launch **S** – self-launch **W** – winch launch

P – Solo **P1** – Pilot in command (multi-seat) **P2** – Dual or 2nd pilot

The GNZ Pilot's Logbook is recommended as being a suitable logbook for meeting this requirement.

3.2 All entries in a pilot's logbook are to be made using a suitable permanent-ink type pen.

3.3 Logbook endorsements are required for launch method, DI approval, Passenger Rating, type rating, Cross-Country Pilot (XCP), powered glider endorsement, instructor ratings, aerobatic ratings, tow pilot ratings, flight in IMC, independent operation and competition finish approvals. Note that a powered glider endorsement applies to a specified type, and a further course of instruction is required for endorsement on any additional type.

3.4 Logbook endorsements are only to be made by those approved to do so. Endorsements shall include a statement of what the endorsement approves the pilot to do, when and by whom it is approved. The endorsement shall be signed and dated by the approved person.

3.5 Pilots may act as pilot-in-command of a glider or powered glider only in accordance with the aforementioned endorsements.

4. Training and Instruction

4.1 No affiliate may conduct gliding operations that involve training or instruction unless such training or instruction is at all times under the supervision of a GNZ A or B Category gliding instructor.

4.2 Where an affiliate does not have an A or B Category gliding instructor as a member, the Regional Operations Officer may approve the provision of supervision of training or instruction by an appropriately qualified gliding instructor from another affiliate.

5. GNZ Student Glider Pilot

5.1 A student glider pilot is a pilot who may not act as pilot-in-command of a glider except under the direct supervision of a GNZ gliding instructor. (See paragraph 2.2 above for the meaning of 'direct supervision'.)

5.2 A student glider pilot may not act as pilot-in-command of a glider unless they have successfully completed a course of instruction, the syllabus of which is detailed in Appendix 2-C, sections 1(a) and 1(b) commencing on page 77. Competency must be demonstrated in the type of launch to be used (aerotow, auto-tow launch, winch or self-launch).

5.3 A student glider pilot is not permitted to carry a passenger.

6. GNZ Certificates

6.1 Solo Pilot Certificate (issued by GNZ affiliate)

Requirements for Issue

No person shall be awarded a GNZ Solo Pilot Certificate unless they:

(a) Have satisfactorily completed the GNZ Solo Pilot Certificate Training Syllabus as detailed in Appendix 2-C, sections 1(a) and 1(b) commencing on page 77. (Note: not all launch methods need to be covered in order to comply with this paragraph), and

(b) Have completed a safe solo circuit.

6.2 Soaring Pilot Certificate (issued by GNZ affiliate)

Requirements for Issue

No person shall be awarded a GNZ Soaring Pilot Certificate unless they:

(a) Have satisfactorily completed the GNZ Soaring Pilot Certificate Training Syllabus as detailed in Appendix 2-C, section 1(c) commencing on page 77. (Note: not all launch methods need to be covered in order to comply with this paragraph), and

(b) From time of release at a height of no greater than 2000 ft AGL, have safely completed a soaring flight of at least 90 minutes duration.

6.3 Cross-Country Pilot Certificate (XCP, issued by GNZ under delegation from CAA)

Requirements for Issue

Except as provided in section 2-5 (page 52), no person shall be awarded a GNZ XCP unless their CFI is satisfied that they are a fit and proper person having regard to Sections 9 and 10 of the Civil Aviation Act and they:

(a) Have satisfactorily completed a course of instruction covering the XCP Training Syllabus detailed in Appendix 2-C commencing on page 77. (Not all launch methods need to be covered in order to comply with this paragraph.)

(b) Have safely completed a solo soaring flight of at least 50 km between two points.

7. Transition Procedures for QGP and FAI Badge Holders

7.1 From 15 June 2020, QGPs will not be issued.

7.2 A pilot who holds a QGP certificate issued prior to 15 June 2020 and has also achieved the distance leg of an FAI Silver Badge or higher, is deemed to qualify for an XCP certificate and this will be recorded in the central membership database accordingly.

7.3 A pilot who holds a QGP certificate issued prior to 15 June 2020 but has not been awarded the distance leg of an FAI Silver Badge or higher may be considered for issue of an XCP certificate on satisfactory completion of form OPS 03A.

7.4 A pilot who holds an FAI Silver Badge or higher at 15 June 2020 is deemed to qualify for an XCP certificate and this will be recorded in the central membership database accordingly.

8. Passenger Rating

8.1 A QGP or XCP holder may act as pilot-in-command of a glider carrying a passenger provided the pilot is 16 years of age or over. Before this privilege may be exercised, the glider type, launch method and control seat position shall be specified and endorsed in the pilot's logbook by a GNZ A or B Category gliding instructor approved to assess the candidate and to make such an endorsement.

8.2 A Soaring Pilot Certificate holder may also act as pilot in command of a glider carrying a passenger under the same conditions as in paragraph 8.1 above providing that the pilot:

- Has demonstrated a satisfactory solo field landing
- Meets all of the requirements for the issue of an XCP except for the requirement for a 50 km solo flight
- Is experienced and current in the glider type
- Stays within comfortable gliding range of the airfield (typically 5 NM)
- Has obtained approval on the day from the Duty Instructor for each flight.

9. Task Pilot

9.1 A Task Pilot is one who has completed a task at a GNZ contest and has achieved the Gold distance flight of 300km.

9.2 The Task Pilot training syllabus is detailed in Appendix 2-C, section 1(d) commencing on page 77. Preparation is the responsibility of the pilot and progress is no longer signed off by an instructor.

10. Alpine Pilot

10.1 Becoming an Alpine Pilot is the ultimate achievement of the GNZ Flight Training Programme.

10.2 The Alpine Pilot training syllabus is detailed in Appendix 2-C, section 1(e) commencing on page 77. Preparation is the responsibility of the pilot and involves extensive reading and participation in special training courses.

11. Independent Operations

11.1 Affiliates, groups or individuals may engage in gliding that does not include any training or instruction, provided that each pilot engaged in such operations is an XCP holder and has their logbook endorsed with an approval for independent operations. (Note, however, that affiliate rules may require higher qualifications, e.g. the presence of a gliding instructor.)

11.2 In all cases, pilots remain responsible to their CFI (or Contest Director if participating in a GNZ sanctioned gliding competition) for any independent operations.

12. Additional Endorsements

12.1 Additional Glider Type

For pilots not holding a GNZ XCP certificate, an endorsement for an additional glider type must be made on satisfactory completion of the syllabus of training for type conversions as detailed within the Soaring Pilot Certificate Training Syllabus, as detailed in Appendix 2-C commencing on page 77.

12.2 Additional Launch Method

12.2.1 The Solo Pilot Certificate Training Syllabus, as detailed in Appendix 2-C commencing on page 77, covers the requirements for training in aerotow and / or wire launching. If training in only one method has been completed, the course of instruction as detailed in Appendix 2-C, in the other type of launch to be used, must be completed before endorsement is made for the qualification in that additional launch method.

12.2.2 If endorsement for a self-launching powered glider is required, the pilot shall:

(1) hold a GNZ XCP certificate, and

(2) have completed the training and examination detailed in the syllabus at Appendix 2-D commencing on page 83.

12.3 Additional Control Seat Position

A logbook endorsement for control from a different seat position (e.g. back seat in the case of a tandem two-seat glider) will be made on satisfactory completion of training in handling and control of the glider from the additional seat position.

13. Pilot Currency Requirements

Affiliates are to set currency requirements that they consider appropriate to the type of aircraft they operate and the environment in which they operate.

14. Biennial Flight Reviews

14.1 Notwithstanding paragraph 11 above, no pilot may act as pilot in command of a glider for longer than 24 months from the date of the issue flight test for an XCP certificate (or Part 61 licence), or from the date of first solo in the case of a pilot not holding an XCP Certificate, unless that pilot has successfully completed a biennial flight review (BFR) in accordance with paragraph 12.2 below within the previous 24 months. Logbook evidence of a current Australian AFR in accordance with GFA MOSP Part 2 may be acceptable as an alternative to this BFR requirement if the reviewer considers the pilot's overall experience to be adequate.

14.2 A BFR must be conducted by a category A, or B gliding instructor and consist of flight instruction to review those manoeuvres and procedures applicable to the pilot in command privileges the holder wishes to exercise (reference GNZ Advisory Circular AC 2-05 Biennial Flight Reviews). In the case of a CPL(G) the BFR must be conducted by a ROO or the NOO.

14.3 An instructor conducting a BFR must make an appropriate entry in the pilot's logbook immediately after the flight review has been satisfactorily completed to record the pilot in command privileges remaining current, plus the expiry date, the instructor category and name. The Instructor may require the pilot's next review to be carried out earlier than 24 months hence. The instructor shall also complete GNZ form OPS 11 and submit a copy to the pilot and, in the case of a PPL(G) or CPL(G), send a copy to CAA Personnel Licensing.

15. Examinations

Details of the various examinations for pilot qualifications and approvals are contained in the GNZ Advisory Circular AC 2-03 Pilot Examinations.

16. Glider Aerobatic Flight Rating (AFR)

16.1 To be eligible for a glider AFR a candidate shall complete a ground and a flight-training course and have demonstrated competency in glider aerobatics. The AFR is issued in one of four levels, each with specific aerobatic experience requirements and associated privileges that are set out in detail in GNZ AC 2-06 Aerobatic Flight in Gliders and which rely on Exemption 16/EXE/15 granted by the Director.

16.2 Aerobatic Rating Ground Course: This shall cover the Aerobatics section of the Advanced Training Syllabus – Appendix 2-C (page 82) – conducted by the holder of a glider aerobatic instructor rating.

16.3 Aerobatic Flight Course: The course shall include flight training in the aerobatic manoeuvres for which the rating is sought, conducted by the holder of a glider aerobatic instructor rating.

16.4 Aerobatics Competency Assessment: This shall be conducted by the holder of a glider aerobatic instructor rating.

16.5 Note that a CAR Part 61 aerobatic rating gained solely on powered aircraft does not automatically translate to gliders operated under GNZ's CAR Part 149 certificate.

16.6 Spin training: CAR Part 91.701(f), states that a pilot of a glider may operate a glider in aerobatic flight below a height of 3000 feet above the surface without holding an aerobatic rating issued in accordance with Part 61 if—

(1) the aerobatic flight is for the purpose of spin training; and
(2) the flight is conducted at a height not less than 1000 ft above the surface.

16.7 Low Level Aerobatics: Aerobatics below 1,000 ft above the surface require the pilot in command to hold a glider AFR at Level 4, as set out in detail in GNZ AC 2-06 Aerobatic Flight in Gliders.

INSTRUCTOR RATINGS

1. Instruction in Gliders and Powered Gliders.

1.1 GNZ gliding instructors will accomplish the task of conducting training of glider pilots. They are responsible for training pilots to be safe, efficient and effective cross-country soaring pilots in accordance with the GNZ training syllabus. The syllabus of training for GNZ gliding instructors is detailed in Appendix 2-E commencing on page 86.

1.2 There are 4 categories of rating: A, B, C and D Category. Each category has specific roles and limitations as follows:

(a) The A Cat gliding instructors are the most senior ranked instructors, whose experience, wisdom and maturity can be relied upon to promote, maintain and, if necessary, enforce good standards. They provide instruction in all modules of the GNZ training syllabus that they themselves have been approved to teach. Additionally, to be eligible for A Cat the candidate must be suitable for the role of an approved Instructor Trainer.

(b) The B Cat gliding instructor is considered a senior instructor who may be relied upon to perform instructional duties without close supervision. They provide instruction in modules of the GNZ training syllabus that they themselves have been approved to teach. Additionally, the B Cat may take responsibility for field operations and the authorisation of first solos by student glider pilots. A suitably trained B Cat may become an approved Instructor Trainer.

(c) The C Cat gliding instructor is considered to be at the entry level of instructional experience. The role of the C Cat Instructor primarily involves instruction in exercises from the GNZ Solo Pilot training syllabus. Instruction in further modules of the GNZ training syllabus may only be conducted once they have been approved to teach them by the CFI, designated Deputy or approved Instructor Trainer.

(d) The D Cat gliding instructor is considered a specialist instructor. They provide instruction in specific exercises from the training syllabi. Instruction in particular exercises may only be conducted once taught and authorised by the CFI, designated Deputy or approved Instructor Trainer.

1.3 All GNZ gliding instructors are responsible for setting and maintaining the highest possible standards of instruction, personal flying skills and discipline.

2. Instructor Trainers

2.1 The training of new instructors and ongoing training of rated instructors to expand the number of exercises they are authorised to teach is to be conducted by approved Instructor Trainers. Instructor Trainers will be A Cat and some Senior B Cat instructors who have themselves completed training in the training of instructors.

2.2 The syllabus of training for Instructor Trainers is contained in Appendix 2-F, commencing on page 93.

2.3 It is desirable that the CFI of the affiliate, and an additional A Cat or senior B Cat instructor at each affiliate gain this qualification to ensure the ongoing task of training instructors is satisfied.

3. Category 'D' Gliding Instructor Rating

A glider pilot will be known as a category 'D' GNZ gliding instructor when they;

(a) Are at least 18 years of age;

(b) Have completed at least 50 hours as pilot-in-command of a glider and/or powered glider, or alternatively at least 25 hours as pilot-in-command of a glider and/or powered glider if the holder of a category 'A', 'B' or 'C' flight instructor rating - aeroplane;

(c) Have completed the GNZ syllabus of instruction detailed in Appendix 2-E commencing on page 86;

(d) Have completed at least 50 launches by winch, aero-tow, auto-tow or powered glider self-launch as pilot-in-command except that the instructor rating shall not be endorsed valid for any of these launching methods unless at least 25 launches by that method have been completed;

(e) Have demonstrated to the CFI, designated Deputy or approved Instructor Trainer a satisfactory standard of instructional technique, flying skills and airmanship for completing the instructional task of a D Cat; and

(f) Have a rating certificate signed by a person who is authorised by the President to administer the issue of instructor ratings.

4. Category 'D' Gliding Instructor Rating Privileges

A category 'D' gliding instructor rating permits the holder to give dual flight instruction in gliders:

(a) In which the holder has a minimum of ten hours flight experience, including at least 10 take-offs and 10 landings, and a log book endorsement from the CFI, designated Deputy or approved Instructor Trainer certifying competence on the type; and

(b) In exercises the holder has been trained and is currently approved to provide instruction in; and

(c) Provided that for the first five hours of flight instruction the holder must be under the direct supervision of a category 'A' or 'B' gliding instructor.

5. Category 'C' Gliding Instructor Rating

A glider pilot will be known as a category 'C' GNZ gliding instructor when they;

(a) Are at least 18 years of age;

(b) Have completed at least 50 hours as pilot-in-command of a glider and/or powered glider, or alternatively at least 25 hours as pilot-in-command of a glider and/or powered glider if the holder of a category 'A', 'B' or 'C' flight instructor rating - aeroplane;

(c) Have completed the GNZ syllabus of instruction detailed in Appendix 2-E commencing on page 86;

(d) Have completed at least 50 launches by winch, aero-tow, auto-tow or powered glider self-launch as pilot-in-command except that the instructor rating shall not be endorsed valid for any of these launching methods unless at least 25 launches by that method have been completed;

(e) Have demonstrated to the CFI, designated Deputy or approved Instructor Trainer a satisfactory standard of instructional technique, flying skills and airmanship for completing the instructional task of a category ‘C’ gliding instructor;

(f) Have a rating certificate signed by a person who is authorised by the President to administer the issue of instructor ratings.

6. Category 'C' Gliding Instructor Rating Privileges

A category 'C' gliding instructor rating permits the holder to give dual flight instruction in gliders:

(a) In which the holder has a minimum of two hours flight experience, including at least 10 take-offs and 10 landings, and a log book endorsement from the CFI, designated Deputy or approved Instructor Trainer certifying competence on the type; and

(b) In exercises, and in conditions, and at sites the holder has been trained and is currently approved to provide instruction in; and

(c) Provided that for the first five hours of flight instruction the holder must be under the direct supervision of a category 'A' or 'B' glider instructor; and

(d) Provided that the authorising of any pilot to carry out a first solo flight is not permitted.

A category ‘C’ gliding instructor may be approved to:

(e) Take responsibility for the control of field operations that involve flight instruction in gliders, and

(f) Directly supervise student pilots flying solo.

7. Category 'B' Gliding Instructor Rating

A glider pilot will be known as a category 'B' GNZ gliding instructor when they:

(a) Are at least 19 years of age;

(b) Are the holder of a category 'C' gliding instructor rating and have completed at least 25 hours ab initio dual instruction in gliders and/or powered gliders;

(c) Have been trained and approved to conduct dual instruction in all modules of the GNZ Solo Pilot Training Syllabus;

(d) Have completed at least 100 hours as pilot-in-command of a glider and/or powered glider, or alternatively at least 50 hours as pilot-in-command of a glider and/or powered glider if the holder of an aeroplane category 'A' , 'B' or 'C' flight instructor rating;

(e) Have demonstrated to the National Operations Officer or the Regional Operations Officer or in their absence, a designated approved Instructor Trainer a satisfactory standard of instructional technique, flying skills and airmanship for completing the instructional task of a B Cat;

(f) Have a rating certificate signed by a person who is authorised by the President to administer the issue of instructor ratings.

8. Category 'B' Gliding Instructor Rating Privileges

A category 'B' gliding instructor rating permits the holder to give dual flight instruction in gliders:

(a) In which the holder has completed at least five take-offs and five landings, and has a log book endorsement from the CFI, designated Deputy or approved Instructor Trainer certifying competence on the type; and

(b) In exercises the holder has been trained and is currently approved to provide instruction in.

9. Category 'A' Gliding Instructor Rating

A glider pilot will be known as a category 'A' GNZ gliding instructor when they:

(a) Have been the holder of a category 'B' gliding instructor rating for at least the preceding 12 months;

(b) Have completed at least 250 hours as pilot-in-command of a glider and/or powered glider;

(c) Have completed at least 150 hours dual instruction in gliders and/or powered gliders except that for the holder of a category 'A' or 'B' Flight Instructor rating for powered aircraft this may be reduced to 100 hours;

(d) Have demonstrated to the National Operations Officer or in their absence, the Regional Operations Officer a satisfactory standard of instructional technique, flying skills and airmanship for completing the instructional task of an A Cat and an Instructor Trainer; and

(e) Have a rating certificate signed by a person who is authorised by the President to administer the issue of instructor ratings.

10. Category 'A' Gliding Instructor Rating Privileges

An 'A' gliding instructor rating permits the holder to give dual flight instruction in:

(a) Gliders they have flown as pilot-in-command; and

(b) In exercises the holder has been trained and is currently approved to provide instruction in; and

(c) Instructional technique for trainee instructors when approved as an Instructor Trainer

11. Extension of Gliding Instructor Rating for Additional Launch Methods

A gliding instructor seeking qualification to instruct in additional launch methods shall successfully complete the syllabus of training for the relevant launch method detailed in Appendix 2-E commencing on page 86.

12. Extension of Gliding Instructor Ratings for Aerobatics

12.1 A gliding instructor seeking qualification to instruct in glider aerobatics shall have the aerobatic experience set out in section 4 of GNZ AC 2-06 Aerobatic Flight in Gliders and successfully complete the syllabus of training for teaching aerobatics as detailed in Appendix 2-E on page 92.

12.2 Aerobatic Instructor ratings are issued in one of two categories, Aero or Advanced Aero, with the associated privileges, as detailed in GNZ AC 2-06.

13. Application for Gliding Instructor Ratings

13.1 Application for a gliding instructor rating, upgrade to a higher category, extension to an additional launch method, approval as an Instructor Trainer, or rating as an aerobatics instructor shall be made on GNZ form OPS 07.

13.2 Before proceed with the application, the certifying CFI must be satisfied that the applicant is a fit and proper person having regard to sections 9 and 10 of the Civil Aviation Act.

13.3 The OPS 07 application must clearly state which rating is requested, and must be sent through the affiliate's CFI to the appropriate ROO. The ROO will add his/her recommendation before passing the application on to the NOO, who is responsible for processing the application and issuing the rating on behalf of the President.

13.4 The instructor rating card issued by the NOO will specify the category, the applicable launch methods, and whether or not the instructor is approved as an instructor trainer and/or rated as an aerobatics instructor.

14. Currency Requirements for Instructor Ratings

14.1 No instructor shall exercise the privileges of an instructor rating unless they:

(a) Have within the last 12 months flown 15 hours or 50 launches in gliders or powered gliders of which 5 hours or 25 launches must be instructional flying and 5 hours must be solo flying;

(b) Have undergone a competency review within the last 24 months in which they have demonstrated to a reviewer their ability to instruct to the same standard as was required for the initial issue of the rating. This demonstration also serves as a Biennial Flight Review for the instructor. The reviewer must be the instructor's CFI, an approved Instructor Trainer, or a ROO or the NOO. Once completed, the instructor's log book shall be endorsed by the reviewer stating what privileges are considered current, and the date for the next review. (The reviewer has discretion to set a shorter period to the next review if considered appropriate.)

14.2 If Para (a) above cannot be satisfied, the instructor:

(a) Must demonstrate ability to instruct to the same standard as was required for the initial issue of the rating, and

(b) Have their logbook endorsed by the instructor conducting the check prior to the holder exercising the privileges of their instructor rating.

14.3 An instructor temporarily without a valid medical may exercise the privileges of his/her rating that do not require acting as pilot in command, such as supervising flying operations, conducting briefings and ground training, conducting BFRs on XCP holders.

15. Suspension of an Instructor Rating

15.1 Any GNZ gliding instructor who has a serious accident while flying a passenger or student will automatically have their rating suspended pending the result of an inquiry. The suspension may be lifted if, after the inquiry, the chairperson recommends it and the appropriate ROO agrees.

15.2 The chairperson will usually be the CFI but if the instructor involved is the CFI then the Deputy CFI or another instructor appointed by the ROO shall fulfil the duties of inquiry chairperson.

15.3 Instructor ratings can be revoked only by the Director of Civil Aviation.

COACHING

1. Overview

1.1 The mission of coaching in NZ is to provide close support to pilots through mentoring, encouragement and goal setting to ensure all pilots who so desire transition from safe and competent local / circuit flyers to safe and competent cross-country flyers.

1.2 GNZ recognises that regular cross-country flying is a key to post solo / post XCP, membership retention and contribution back to our sport.

1.3 Pilots of all levels from pre-solo to advanced cross-country will and can benefit from the support and guidance offered by a coach.

2. Role of the coach

2.1 The role of a coach within a club is to:

(a) Use the spread sheet Pilot Progress for Coaches to track and ensure the progress of all club pilots with respect to the listed cross-country flying goals;

(b) Ensure that all new pilots, as early as possible in their training, are taken on a dual cross-country experience flight as P2 even if this involves sending them to another club or commercial gliding organisation to receive this experience;

(c) Create, maintain and promote a positive cross-country culture where regular cross-country flying is the norm and not the exception;

(d) Ensure all pilots as soon as possible sign up to the OLC and start recording and comparing their flights;

(e) Work with all club pilots, especially recent post solo / XCP to support them and set goals for progress and achievement, with particular focus on the cross-country elements of the XCP and Advanced Training Syllabus;

(f) Brief a pilot prior to, then de-brief a pilot post the completion (via out-landing or return home) of a cross-country flight.

(g) Aim to pair a pilot up with another pilot of similar ability and encourage these pilots to support and encourage each other on their journey;

(h) Assign a more senior cross-country pilot as a mentor for newer developing pilots if the coach is not the direct mentor;

(i) Conduct coaching activities and training in cross-country and competition flying techniques as per the GNZ Coaches Manual;

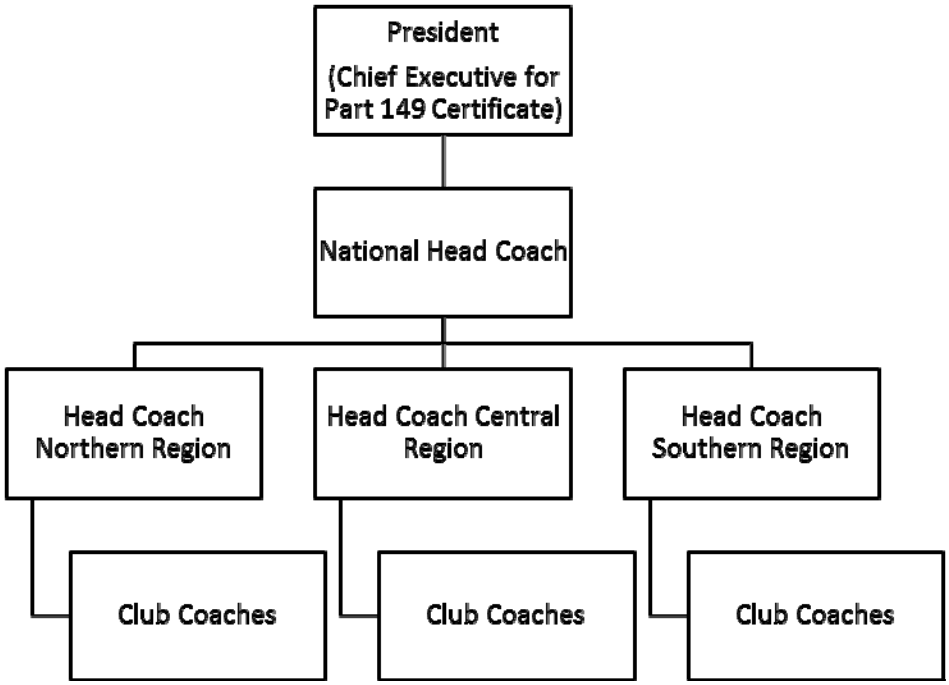
(j) Conduct all coaching activities under the terms and conditions determined by the club's instructors' panel and the club's Chief Flying Instructor. For reasons of transparency and reporting, club coaches should attend at least in part, all instructors' panel regular meetings so as to update the panel on pilot progress and coaching activities;

(k) Assist the transition of pilots that have been taught how to fly, to soaring pilots who are confident and competent cross-country pilots capable of achieving their goals.

NOTE: Unless an accredited Coach is also a GNZ authorised instructor he/she is not authorised to sign off any exercises in the GNZ Pilot Training Syllabus.

3. Structure of Coaching in Gliding New Zealand

3.1 The following chart depicts the structure and reporting hierarchy of coaching in GNZ.



4. National Head Coach

4.1 The National Head Coach is appointed by the GNZ Executive Committee.

4.2 The role and responsibilities of the National Head Coach are to:

(a) Appoint Head Coaches for Northern, Central and Southern Regions;

(b) Maintain and keep up to date the GNZ Coaches Manual;

(c) Maintain a record of all accredited coaches in NZ;

(d) Liaise with coaching contacts and keep up to date with coaching practices and available resources in gliding overseas, especially Australia;

(e) Be a primary source of information for Regional coaches and ensure consistency of information and teaching standards at a National level;

(f) Report to the GNZ Executive once a year on activities, achievements and compiled statistics from club Pilot Progress for Coaches spreadsheets and the OLC for use in the GNZ annual report;

(g) Regularly report achievements to the membership in terms of OLC results. (eg longest flight by which pilot, fastest flight by which pilot, OLC Champion leader board for NZ, OLC Club leader board for cross country km);

(h) Identify talented pilots who could benefit from additional national or international level coaching support.

5. Regional Head Coaches

5.1 The regional Head Coaches are appointed by the National Head Coach.

5.2 The role and responsibilities of the Regional Head Coaches are to:

(a) Accredit and appoint club Coaches in their respective regions. Regional coaches should ensure that every club has at least one coach. Larger clubs would be expected to have more coaches. Small clubs without a coach should be appointed access to a coach from their nearest club;

(b) Maintain a record of all accredited coaches in their region;

(c) Ensure a cross-country training course is held in their region once a year;

(d) Ensure a coaching course with the aim of accrediting new coaches is held in their region at least once a year. This can be run in conjunction with another course (eg instructors course or cross-country course to make the most of available resources);

(e) Be the primary source of information and material for use by club coaches and ensure consistency in teaching standards;

(f) Work actively in the Region in the promotion of club visits to other clubs and locations (away weekends) and cross-country flying and competition weekend events and rallies.

(g) Report to the National Head Coach once a year on activities, achievements and compile statistics from club Pilot Progress for Coaches spreadsheets and the OLC for use in the GNZ annual report;

(h) To identify talented pilots in their Region that could benefit from additional coaching support.

6. Selection and Accreditation of Coaches

6.1 A prospective coach should meet the following minimum requirements:

(a) 40 hours solo flying in the last two years;

(b) Three 300km or longer cross-country flights;

(c) At least six successful out-landings;

(d) A minimum of 300 hours gliding experience;

(e) A minimum of 18 years of age;

(f) Possess the personal characteristics that in the opinion of the Regional Head Coach will make them a good coach.

NOTE: A coach does not necessarily have to be rated in two seat gliders. Lead and follow coaching from a single seat glider or goal / task setting, briefing and debriefing from the ground are all effective coaching techniques. If coaching in a two seat glider however, a rating relevant to the seat position and glider type will be required. The coach may choose to fly as P1 or P2 depending on the experience being imparted.

6.2 Prospective coaches will become GNZ accredited coaches following their attendance at a GNZ sanctioned coaching accreditation course. The course will cover the topics outlined in the New Zealand Gliding Coaches manual. Course participants will be expected to demonstrate not only their knowledge of the topic at hand but an ability to impart this knowledge in an empathetic and professional manner. Coaches will need to show that they understand barriers to progress and that they can motivate, inspire and set realistic, achievable and progressive goals that pilots can tick off on their journey to becoming experienced and competent cross country pilots.

6.3 Accreditation as a coach will remain valid for a period of two years after which the Regional Head Coach will reassess the candidate's commitment to being an effective coach in terms of the coaches own cross country flying (eg flights posted on the OLC, competitions entered, solo hours flown) and with respect to the progress made, in particular on the Pilot Progress for Coaches spreadsheet, of pilots under the direct responsibility of the coach. The Regional Head Coach at his or her sole discretion may choose to revalidate for another two years, or not, the coaches accreditation.

FOREIGN GLIDERS AND PILOTS

1. Gliders not Registered in New Zealand

1.1 Gliders and powered gliders that are not registered in New Zealand may be flown privately in New Zealand provided 1.2 below is followed. Hire and reward operations with such aircraft will be subject to additional requirements by the Civil Aviation Authority of New Zealand, which should be contacted in the first instance.

1.2 The relevant airworthiness and operational requirements of the State of registry (or equivalent) must be complied with. The pilot in command may be required to provide written evidence of aircraft certification showing fitness for flight and/or relevant pilot qualifications in accordance with these foreign requirements.

2. Visiting Foreign Pilots (VFP)

2.1 A visiting foreign pilot (VFP) is defined as a non-NZ resident qualified to fly gliders or powered gliders in their home country and wishing to fly gliders or powered gliders as pilot-in-command in NZ (either foreign registered or New Zealand registered) for a limited period.

2.2 Except as provided in 2.5 below, all VFPs must pay an affiliation fee through a GNZ affiliate and are required to operate under the jurisdiction of that affiliate's CFI. For affiliation fees applicable to VFPs, see page 20 paragraph 11.4. VFPs wishing to fly during a period longer than 3 months are liable for the affiliation fees applicable to members resident in New Zealand; see page 20 paragraph 11.3. Registration as a VFP is accomplished using form ADMIN 06, which should also be used for repeat visits to NZ.

2.3 Unless they are flying under the direct supervision of a category A or B gliding instructor, all VFPs must hold a GNZ XCP certificate. In this context, direct supervision means that the instructor is present at the airfield of takeoff, conducts a pre-flight briefing including guidance on the areas through which the flight is to be conducted, and monitors the progress of the flight (either from the ground or from another aircraft).

2.4 VFPs may have their foreign qualifications and experience recognised as equivalent to GNZ XCP requirements and be issued with an XCP certificate. This is accomplished by completing form OPS 06, with sign-off by a GNZ Category A or B instructor after a flight check to BFR standard. The CFI of the GNZ affiliate will then complete the form and submit it to the GNZ Awards officer. The CFI will also endorse the pilot's logbook to show that he/she has met the requirements for issue of GNZ XCP Certificate. (No OPS 03 form is required for the issue of the XCP certificate via this route.)

2.5 A VFP may fly a glider or powered glider (either foreign registered or New Zealand registered) in New Zealand without being a paid-up member of a GNZ affiliate only in circumstances where he or she is a member of a State national team and is flying in an international event sanctioned by *FAI Gliding*. In such cases the organisers of the event shall be responsible for ensuring that each pilot holds a GNZ XCP certificate, and is also adequately briefed on local operational procedures, airspace rules and typical meteorological conditions by a person nominated by GNZ prior to the first flight from the site concerned.

2.6 A VFP wishing to instruct on the basis of a foreign qualification must be a full flying member of a GNZ affiliate and pay the associated affiliation fee in lieu of the VFP fee. An Instructor Competency Review is required and a GNZ Instructor Rating issued, using the standard form OPS 07 procedure.

USE OF AIRSPACE BY GLIDERS

1. Flight in Visual Meteorological Conditions (VMC)

1.1 VFR operations by gliders and powered gliders shall be conducted in accordance with CAR Part 91.301, as modified by CAR Part 104.55. The minimum flight visibility and distance from cloud requirements from these rules are laid out in the following table:

<table>
<tr><th colspan="2">Class of airspace</th><th>Distance from cloud</th><th>Flight visibility</th></tr>
<tr><td colspan="2">Controlled</td><td>2 km horizontally

1000 ft vertically outside a control zone*

500 ft vertically within a control zone</td><td>8 km at or above 10 000 ft AMSL</td></tr>
<tr><td rowspan="2">Uncontrolled

(Includes VFR Transit Lanes and GAAs when active)</td><td>Above 3000 ft AMSL or 1000 ft above terrain whichever is the higher</td><td>2 km horizontally

1000 ft vertically*</td><td rowspan="2">5km below 10 000 ft AMSL</td></tr>
<tr><td>At or below 3000 ft or 1000 ft above terrain whichever is the higher</td><td>Clear of cloud and in sight of the surface</td><td>5 km</td></tr>
</table>

* CAR Part 104.55 allows the pilot of a glider, above an altitude of 3000 ft and above a height of 1000 ft, but below an altitude of 11000 ft, to fly no closer than 500 ft below cloud within uncontrolled airspace.

1.2 Flight at aerodromes in uncontrolled airspace shall be conducted with a ceiling of at least 600 ft and a visibility of at least 1500 m.

2 Flight in Instrument Meteorological Conditions (IMC)

CAR Part 104.53 allows gliders to fly in IMC if the flight is conducted within —

(a) A restricted area designated for cloud flying; or

(b) Uncontrolled airspace and the pilot confirms with the appropriate ATS unit at intervals not exceeding 15 minutes that there is no known IFR traffic in or near the proposed area of cloud flying.

3 Flight in Controlled Airspace

Operations by gliders and powered gliders in controlled airspace shall be conducted in accordance with the following:

(a) Controlled airspace must not be entered unless a prior ATC clearance is obtained.

(b) A pilot operating in controlled airspace must maintain two-way radio communications with the ATC unit responsible for the airspace concerned on the appropriate frequency unless otherwise authorised by the ATC unit.

(c) Note that controlled airspace becomes uncontrolled during those times when an air traffic control service is not being provided.

4 Flight in General Aviation Areas (Designated Gnnn)

4.1 General Aviation Areas are designated portions of controlled airspace for the purpose of allowing VFR flights access to a portion of previously controlled airspace without the requirement for an ATC clearance. On a case by case basis, these areas are specified as permanently active, activated by approval of the ATC unit responsible for the airspace, or activated by prior notification from an airspace user to the ATC unit responsible for the airspace. The areas become uncontrolled Class G airspace while they are active.

4.2 A pilot must not operate within a general aviation area unless –

(a) In the case of G areas made active by ATC approval, approval has been given and the pilot complies with any request from the ATC unit to vacate the area; or

(b) In the case of G areas made active by notification, prior notification has been given to the ATC unit and the ATC unit has confirmed that the area is active.

5 Flight in Transponder Mandatory Airspace (Designated TM)

5.1 A pilot operating in TM airspace must, unless otherwise authorised or instructed by ATC, operate the transponder in Mode A and Mode C and set the transponder to the code assigned by ATC for the flight or, if not assigned a code by ATC, to 1300.

5.2 In the event of an in-flight emergency when no code has been allocated by ATC, the code should be set to 7700. In the event of loss of radio communications the code should be set to 7600.

5.3 A pilot intending to operate without an operable transponder, in TM airspace that is within controlled airspace, must obtain specific authorisation from ATC as part of the clearance to enter that airspace.

5.4 A pilot operating in TM airspace must immediately advise ATC of any failure of the transponder.

6. Flight in Mandatory Broadcast Zones (Designated Bnnn)

6.1 Mandatory Broadcast Zones are designated portions of uncontrolled airspace where the traffic density or special circumstances require the pilots to make radio broadcasts of their position and intentions on the assigned radio frequency.

6.2 The following broadcasts must be made on the assigned radio frequency:

(a) **At entry** – callsign, position and altitude, and intentions for flight within the zone.

(b) **When joining the circuit of an aerodrome within the zone** – callsign, position and altitude, and intentions.

(c) **Before entering a runway for takeoff from an aerodrome within the zone** – callsign, runway to be used, and intentions for flight within the zone after takeoff.

(d) **At any other time at least at the intervals prescribed for the zone** – callsign, position and altitude, and intentions for flight within the zone.

6.3 While within the zone a listening watch must be maintained on the assigned frequency.

7. Flight in Uncontrolled Airspace and VFR Transit Lanes

7.1 Within uncontrolled airspace, gliders and all other VFR aircraft are entitled to operate completely without reference to ATC. It should be noted that meteorological minima for flight in uncontrolled airspace changes significantly with altitude – ref paragraph 1.1 above for uncontrolled airspace.

7.2 VFR Transit Lanes (Designated **Tnnn**) are designed to separate transiting VFR traffic from arriving and departing IFR flights. As these lanes are classified as uncontrolled airspace, VFR traffic is permitted to operate within them without an ATC clearance.

8. Flight in Restricted Areas, Military Operational Areas and Danger Areas

8.1 A pilot must not operate within a restricted area (Designated **Rnnn**) or a military operational area (Designated **Mnnn**) unless that pilot has the approval of the authority responsible for the area and complies with any conditions imposed or promulgated for it.

8.2 A pilot must not operate within a danger area (Designated **Dnnn**) unless that pilot has determined that the activity associated with the area will not affect the safety of the aircraft.

9.0 Special Airspace Procedures for Gliding Competitions

It is common for special procedures to be agreed between ATC and gliding competition organisers to facilitate tasking through controlled airspace during the competition. Pilots competing at gliding competitions must be specifically briefed on such procedures before entering the controlled airspace concerned.

OPERATIONS - GENERAL

1. Operating Rules for Affiliates

1.1 All affiliates shall set operating rules and procedures to govern the conduct of their gliding operations. An affiliate's rules and procedures must not be less restrictive than any CAA or GNZ rule or procedure. They may, however, be more restrictive.

1.2 Those rules and procedures that apply to flying operations should be contained in a Manual of Standard Operating Procedures (SOP) or an equivalent type of document. Advisory Circular AC 1-02 Club Rules provides guidance on the content and management of SOPs.

1.3 Before any pilot is permitted to fly with the affiliate as pilot-in-command they should be required to sign an SOP register to the effect that they have read the affiliate's rules, that they understand them and that they agree to comply with them.

2. Affiliates Operating Records

2.1 All affiliates shall compile and keep such logbooks; flight records and time sheets as are required to enable an accurate record of flying operations to be maintained.

2.2 Time sheets are to include accurate detail of the following for each flight conducted under the auspices of the affiliates:

- aircraft registration
- name of pilot-in-command
- name of student pilot as applicable
- time of take-off
- duration of flight from take-off to landing

2.3 Private owners have a similar responsibility in respect of their own aircraft.

2.4 Affiliates must provide GNZ with their launch statistics on a six-monthly basis. To facilitate collection, the Executive Officer will send a statistical return form to clubs at the end of December and June each year.

2.5 As the above returns are extremely important both for strategic planning purposes and to enable ongoing funding from Sport NZ, there is a penalty of $10.00 per member for each six-month reporting period for which returns have not been provided within two weeks of the stated deadline.

3. Radio

3.1 Appropriate use of radios should be made in order to enhance safety and efficiency in gliding operations. Standard radio procedures and phraseologies are contained in the CAA publication AC 91-9 Radiotelephony Manual, downloadable from the CAA web site.

3.2 Four VHF radio frequencies have been allocated for use in gliding operations:

(a) 133.55 MHz primary gliding operations channel.
(b) 134.00 MHz general sport aviation chatter channel.
(c) 134.45 MHz secondary gliding operations channel.
(d) 134.85 MHz channel available for communications when retrieving.

3.3 For competition finishes, the designated airfield frequency (where applicable) must be used to avoid conflict with other traffic.

3.4 When radio is being used for winching operations, the frequency in use by airfield traffic must be used.

4. First Aid Kit

Each glider and powered glider shall carry a first aid kit. The carriage of a survival kit is recommended. The contents of the first aid and survival kits are at the discretion of the aircraft operator.

5. Carriage and Use of Oxygen

The carriage and use of oxygen in gliders is regulated through a number of CAA Rule Parts. The GNZ Advisory Circular AC 3-07 Carriage and Use of Oxygen provides guidance on how to comply with the relevant regulations.

6. Crossing Cook Strait

Pilots are to wear a serviceable life jacket and are to ensure that the starting height is adequate for ensuring the glider remains within safe gliding distance of a landable area in the prevailing conditions.

7. Daily Inspections and Duplicate Checks after Rigging

7.1 The pilot-in-command of a glider is responsible for ensuring the glider is airworthy prior to flight. Refer to Section 3-2 (page 109) for airworthiness responsibilities.

7.2 A Daily Inspection (DI) is to be carried out and signed for on each glider and powered glider prior to first flight each day, and after each rigging. The DI is to be carried out in accordance with the instructions in the Daily Inspection & Tech Log (DI Book), the guidance in AC 3-01 and the glider's flight manual.

7.3 A Duplicate Check of rigging is to be carried out and signed for on each glider and powered glider after each rigging. The Duplicate Check is to be carried out in accordance with the instructions in the Daily Inspection & Tech Log (DI Book) and the guidance in AC 3-01.

7.4 To be eligible for the issue of a Daily Inspection approval a person shall be a member of a gliding club affiliated to Gliding New Zealand; and have been instructed and examined in accordance with AC 3-01 by a gliding instructor.

7.5 A person holding a Daily Inspection approval is authorised to carry out a DI and a Duplicate Check after rigging, in accordance with the guidance in AC 3-01, of a glider or powered glider on which they are rated to fly. Persons who are not glider pilots, (ie tow pilots, crew, etc.) who may be called upon to carry out Duplicate Checks, may do so, subject to being instructed in accordance with AC 3-01.

7.6 An XCP holder is authorised to carry out a Duplicate Check after rigging on any glider.

7.7 The holder of a Silver Badge or Instructor rating is authorised to perform a Daily Inspection on any glider.

7.8 A DI approval remains valid while the holder remains a member of a GNZ affiliate.

8. Cockpit Check Lists

8.1 *Pre-Boarding Checks*

A = Airworthy	If already flown today this could be a brief walk-around check. Before first flight of the day check maintenance release and DI signed. Seat cushions adequate and not compressible. Parachutes (if used).
B = Ballast	Glider loading is within placarded limitations and trim ballast, if required, is secure.
C = Controls	Check all controls, including airbrakes and flaps, for correct sense and full deflections.
D = Dollies	All dollies and ground handling equipment removed.
E = Expectations	What might be encountered in the first part of the flight? Wind speed and direction, likely turbulence or crosswind, where you want to be towed to (aerotow), or where you will fly to after release (winch).

8.2 *Pre-Takeoff Checks*

C = Controls	Check flight controls (elevators, ailerons and rudder or equivalents) for full, free and correct movement.
B = Ballast	Ensure pilot weight(s) plus ballast are within placarded limits, and that any required ballast is fitted and secured.
S = Straps	Check harness(es) correctly fastened and adjusted.
I = Instruments	Altimeter set at QNH and other instruments and avionics (including, radio, nav systems, GPS and transponder if fitted) set and functioning.
F = Flaps	Check for full travel in both directions and then set for take-off.
T = Trim	Check for full travel in both directions and then set for take-off.
B = Brakes	Check fully open and even, then closed and locked.
E = Eventualities	Briefly review options and responsibilities for action in the event of a non-normal situation immediately after the launch commences.
C = Canopy	Check closed and locked.

8.3 *Pre-Landing Checks*

S = Straps	Check harness(es) correctly fastened and adjusted tightly.
U = Undercarriage	Check down and locked.
F = Flaps	Check set for landing.
B = Brakes	Check functioning (by brief full extension) then utilise as required.

8.4 *Prior to conducting stalling, spinning or aerobatic manoeuvres*

H = Height	Check sufficient to enable recovery above approved height AGL
A = Airframe	Check brake, flap and undercarriage positions are as required.
S = Security	Check harness secure, no loose articles in cockpit.
E = Engine	Not applicable or set as required.
L = Locality	Check glider positioned so that manoeuvres will be performed clear of built-up areas, cloud, water, and controlled airspace if necessary.
L = Lookout	Ensure no other aircraft in immediate area, particularly below (Perform S turn, do not circle, as this could attract other gliders!)

8.5 Powered Glider Checks

The pilot-in-command of a powered glider shall use the checklist contained in the flight manual.

9. Landing and Take-Off Areas

9.1 Information on certificated, non-certificated public use, military and some non-certificated private use aerodromes may be obtained from the NZAIP Visual Flight Guide.

9.2 Operations at certificated aerodromes where an Air Traffic Service Unit is not established are subject to the approval of and such conditions as may be required by the aerodrome operator. Glider pilots must ensure that the movement area is kept clear and that gliding operations and the presence of public sightseers will not cause a hazard or inconvenience to other aircraft.

9.3 At some controlled aerodromes winch or auto-tow launching operations are permitted, by arrangement with the ATC.

9.4 Landing or other operations at military aerodromes are subject to approval by the appropriate military authority.

9.5 Gliding operations from any place that is not certificated or authorised for use as an aerodrome are permitted only if:

(a) Prior written approval has been obtained from the statutory Board, Government Department, or other public body controlling that place, or

(b) If there is no such controlling or administering authority, prior approval has been obtained from the landowner / occupier of that place.

9.6 Landing at or taking off from a place other than an aerodrome, without prior approval, is permitted for gliding operations provided that the pilot-in-command takes all reasonable steps to advise the landowner, occupier or person or body administering the place, of their intentions prior to landing or taking off of a towplane and/or glider.

9.7 It is accepted that prior notification is not practical in the event of a glider making an outlanding. However, the pilot-in-command should advise the landowner, occupier or person or body administering the place that they have landed on their property, prior to recovering the glider by road or air.

10. Cross-country Operations

10.1 Cross-country operations are defined as airborne operations by a glider beyond a 10 nautical miles (nm) radius of the gliding site launched from. These may only be undertaken if the pilot-in-command is authorised in accordance with section 2-3, commencing on page 37.

10.2 However, the pilot-in-command shall ensure that they remain within safe gliding range of the aerodrome of departure if not qualified for cross-country flights. This may vary from the 10nm radius depending on the weather and the performance of the glider and should be considered to be the point beyond which the pilot cannot get safely back from an altitude of 2,500 ft to 3,000 ft above the aerodrome.

10.3 Notwithstanding the above, in circumstances where the likelihood of an outlanding is remote (having regard to the soaring conditions, the performance of the glider and the experience of the pilot), this 10nm limit may be suitably extended by the instructor in charge. Such extensions shall be valid for a particular flight only.

10.4 Unless cleared for independent cross-country operations a qualified GNZ instructor must brief a pilot before each proposed cross-country flight. The instructor will satisfy himself that the pilot can navigate sufficiently well to avoid Control Zones, etc, is familiar with airspace restrictions in the area to be crossed, and is familiar with cross- country gliding and out-landing techniques.

10.5 A current map, or maps, covering all areas over which the glider will be flown, and depicting all controlled airspace is to be carried aboard the glider.

10.6 For flight following purposes, pilots are to make regular position reports either to club base or to other airborne gliders if possible. Use of a GPS flight tracking device (such as a SPOT messenger) is highly recommended, particularly if the area to be flown is likely to be outside VHF radio coverage.

10.7 Base radio operators at clubs must log all position reports received.

10.8 In all gliding operations more than 10nm from the aerodrome from which the glider took off, the glider must have an automatic 406MHz ELT installed or the pilot must be equipped with a 406MHz ELT(S) or PLB. [Reference CAR Part 91.529(e).]

11. Mountain Flying

As much of the South Island is mountainous, CFI's should ensure that pilots have received adequate training in mountain flying techniques before approving independent operations there, particularly during competitions. Experience has shown that pilots with limited mountain flying experience tend to be prone to loss of awareness and/or significant errors of judgement when flying in the Southern Alps. It is therefore highly recommended that such pilots undertake a mountain flying course and/or arrange mentoring by more experienced pilots before flying in the Southern Alps. GNZ Advisory Circular AC 2-13 Mountain & Ridge Soaring Safety Principles provides further guidance.

12. Flight in IMC by Gliders

12.1 No pilot may act as pilot-in-command of a glider or powered glider in IMC unless they are an XCP holder and have completed appropriate training. Note. A pilot is operating in IMC if the VMC requirements as detailed in section 2-7 para 1 (page 53) of this manual cannot be met.

12.2 During the first five hours of instrument flight following initial qualification, authority shall be obtained from an appropriately qualified instructor prior to each flight in IMC.

12.3 Passengers are not be carried on flights in IMC unless the pilot-in-command has at least five hours instrument flight time and has a valid authority to undertake flight in IMC.

12.4 No person may give instrument flight instruction in gliders or powered gliders unless they:

(a) Hold the appropriate gliding instructor rating and are approved to fly in IMC;

(b) Meet the minimum requirements for the carriage of passengers in IMC;

(c) Have been certified as competent by another appropriately qualified instructor on their ability to give instrument flight instruction.

12.5 Flight in IMC in gliders and powered gliders shall be conducted in accordance with the following requirements:

(a) The flight is conducted in an area designated for cloud flying or in Class G airspace in accordance with section 2-7 para 2 (page 53) of this manual.

(b) No gliders or powered gliders shall be flown in IMC unless the occupants are wearing parachutes and have received instruction on parachuting procedure.

(c) No glider or powered glider shall be flown IMC below the area Minimum Safe Altitude (MSA) which is 2,000 ft above the highest terrain within a 10 nm radius in Designated Mountainous Terrain as depicted in the NZAIP PM or 1,000 ft above the highest terrain in non-mountainous terrain.

(d) Any glider or powered glider entering IMC must be equipped with:

(i) An airspeed indicator, variometer, sensitive altimeter, magnetic compass, turn and slip indicator or artificial horizon; and

(ii) A radio communications transceiver that meets the requirements of CAR Part 91 Appendix A, A.9(c) and is capable of communication with the appropriate ATS unit.

(e) No powered glider shall be flown in IMC with the engine operating.

(f) No glider or powered glider shall enter cloud within a radius of 10 km of a gliding site except from at least 200 ft below the lowest part of the cloud. Prior to entering IMC, position, altitude and intentions should be broadcast on the appropriate gliding frequency and at 15 minute intervals thereafter, and once when back in VMC.

12.6 The above conditions place the onus on the glider pilot not to enter cloud without asking for and receiving information from an ATS unit by radio that there is no known IFR traffic in the area and altitude range in which the pilot wishes to fly in cloud. A clearance to fly in IMC outside controlled airspace cannot be given by Air Traffic Control. Information only can be given, and it is this information regarding imminent IFR traffic that must be sought by the glider pilot wishing to enter cloud. Having received information that there is no IFR traffic in the area, the pilot can fly in cloud for 15 minutes, at the end of which time further information must be sought or the cloud vacated.

13. Search and Rescue (SAR)

13.1 SAR watch will not be maintained by Airways for glider movements unless specifically requested. For full details of available services, etc., see the NZAIP Visual Flight Guide.

13.2 The pilot-in-command shall take reasonable steps to ensure a responsible person on the ground knows their flight intentions in case SAR action is required.

13.3 In flight, the pilot-in-command shall advise of flight progress and any changes to their original intentions.

13.4 The duty instructor or person in charge of flying at the launching site is responsible for alerting the Rescue Co-ordination Centre (RCCNZ) if required. In addition, any other person in receipt of information that search or rescue action is required must alert RCCNZ.

13.5 RCCNZ can be contacted on the 24hr emergency number, **0508 472 269**.

14. Accidents and Incidents (Occurrences)

14.1 **Accident** means an occurrence that is associated with the operation of a glider and takes place between the time any person boards the glider with the intention of flight and such time as all such persons have disembarked, being an occurrence in which a person is fatally or seriously injured or the glider sustains damage or structural failure, or the aircraft is missing or is completely inaccessible. [In this context, "damage" means the structural strength, performance, or flight characteristics of the glider are adversely affected and would normally require major repair or replacement of the affected component.]

14.2 **Incident** means an incident involving circumstances indicating that an accident nearly occurred.

14.3 ***Reporting requirements for accidents and incidents are set out in the table below.***

14.4 In the case of a fatal accident involving a glider or a towing aircraft, the GNZ President and the Chairman of the Membership Development Committee should also be advised as soon as possible in order to facilitate their response to any media inquiry.

14.5 Further information, including the CAR Part 12.101 requirements regarding access to aircraft involved in an accident can be found in GNZ Advisory Circular AC 2-08 Accidents & Incidents.

REPORTING REQUIREMENTS FOR ACCIDENTS & INCIDENTS

Occurrence Type	Reporter	Reporting Requirements
Aircraft accident	Pilot in command[1]	1. Immediate notification by telephone to: a) CAA[2] and b) The relevant CFI[3]. 2. Submit form CA005 and flight crew statements to CAA (plus copy to NOO) within 10 days.
	CFI or Contest Director	Report initial notification to the relevant ROO or NOO as soon as practicable by telephone.
Incident	Pilot in command or other relevant person	1. Notification as soon as practicable to the relevant CFI[3]. 2. Submit GNZ form OPS 10 to the relevant ROO within 14 days[4].
	CFI or Contest Director	Report initial notification to the relevant ROO or NOO as soon as possible by telephone.

15. Prohibited Substances

15.1 **Prohibited substance** means a substance so described in the Prohibited List published by Drug Free Sport NZ (DFNZ) from time to time on its web site www.drugfreesport.org.nz

15.2 The Sports Anti-Doping Rules made by DFNZ from time to time are applicable – reference GNZ Advisory Circular AC 1-03 Anti-Doping Policy.

15.3 If at any time a CFI or Contest Direct suspects that a pilot is affected by the use of a prohibited substance or there is evidence of such use, they may demand that the pilot be tested in accordance with DFNZ procedures. If such a test proves positive, its cost will be at the pilot's expense and they will face an appropriate sanction, such as disqualification of the pilot's results if the violation occurs during a gliding competition. Repeat offenders may face escalating sanctions culminating in a life ban from participating in the sport.

[1] Or, if the pilot has been killed or incapacitated, the aircraft operator must notify instead.

[2] 24-hour number **0508 ACCIDENT** (0508 222 433)

[3] If the relevant CFI is not available, report to the ROO or NOO. For occurrences during gliding competitions, report to the Contest Director instead.

[4] If full information is not available within 14 days, a preliminary report should be submitted, and the remaining information supplied as soon as it is available.

COMBINED GLIDER AND POWER OPERATIONS

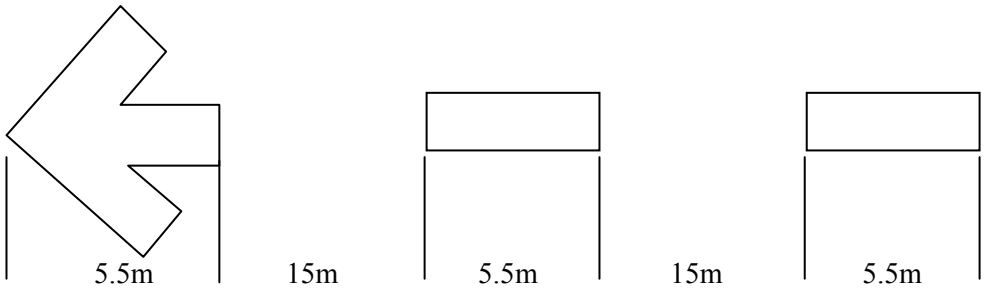
1. Combined Operations

1.1 When there are powered aircraft operating at an aerodrome, gliders must conform with or avoid the power traffic pattern. Any S-turn or orbits prior to final approach must be carried out in an area that is clear of the traffic pattern. Gliders should land into wind on the left side of the landing area so as to leave a clear space for other aircraft. Movements of vehicles necessary for operations must not conflict with aircraft operations. The position of any launching wire must be such that it will not endanger or inconvenience aircraft operations.

1.2 Operating requirements for individual aerodromes may be found in the NZAIP VFG and in Part 93.

2. Gliding Arrow

2.1 When gliding is in progress an arrow formed of white fabric or plastic material may be displayed on the surface, pointing in the direction of take-off and landing (see figure). At unattended aerodromes gliding clubs are encouraged to use the arrow to indicate gliding is in progress. The arrow should be positioned adjacent to the take-off area and not less than 60 metres from the threshold of the active vector.



2.2 This will indicate to all users of the aerodrome that:

(a) Gliding is in progress.

(b) Gliders are being landed and being towed off adjacent to and in the direction of the arrow.

(c) Towlines are likely to be on the ground at any distance from the towing source, and on or parallel to the gliding arrow.

3. Air Traffic Control Visual Signals

3.1 At Controlled Aerodromes, a watch must be kept for visual signals, and authorisation for take-off and movement of gliders or vehicles on the field must be obtained by means of visual signals or by radio from Air Traffic Control.

3.2 The following light signals could be expected by a glider pilot, vehicle driver or pedestrian at a Controlled Aerodrome:

COLOUR AND TYPE OF SIGNAL	TO AIRCRAFT IN FLIGHT	TO AIRCRAFT ON THE GROUND
Steady Green	Cleared to land	Cleared for take off, or cleared to proceed
Steady Red	Give way to other aircraft and continue circling*	Stop
Series of Green Flashes	Return for landing**	Cleared to taxi
Series of Red Flashes	Aerodrome unsafe - do not land	Move clear of landing area in use
Series of White Flashes	Land at this aerodrome and proceed to apron **	Return to starting point on aerodrome
Series of Alternate Red and Green Flashes	Danger - be on the alert	Danger - be on the alert
Red Pyrotechnic	Notwithstanding any previous instructions, do not land for the time being.	

* Circling means continue tracking via the aerodrome traffic circuit. Do not orbit in position.

** Clearance to land and taxi will be given in due course

The receipt of a signal to proceed means ‘it is your turn - go ahead’. It provides the allocation of priority rather than the separation of traffic.

Although authorised to land or taxi as the case may be, the pilot still has to be satisfied that there is no collision risk.

LAUNCHING

1. Introduction

Launching of gliders depends for its success on the ability of people in separate locations to work as a team. The safety of all involved is to some extent affected by the action of the others. It is essential that all involved have a sound understanding of factors governing the operation of the launch equipment as well as the aircraft.

2. GNZ General Requirements and Standards for Launching

2.1 A glider pilot must have completed the training syllabus for the launch method to be used and had their logbook endorsed for the appropriate type of launch before acting as pilot-in-command.

2.2 The launch vehicle (which includes tow-planes, winches and auto-tow vehicles) must be fitted with a tow release mechanism. Such a release mechanism must allow the launch operator to release or cut the towline or cable without delay or hazard when required.

2.3 The launch vehicle must have a daily inspection by a person approved by the affiliate. The affiliate shall establish a suitable DI schedule to ensure all launch equipment is checked for its serviceability prior to use.

2.4 The release mechanism on both the glider and launch vehicle shall be tested prior to the first flight of each day. Where a guillotine is used as the primary release mechanism, it is not necessary to check the operation of the guillotine each day. However, the launch operator must be satisfied that the general integrity and functionality of the mechanism is acceptable.

2.5 The glider end of all launch cables and tow ropes must be fitted with double rings meeting the specifications given in Appendix 3-A (page 116). Rings at the glider end of the cable or tow rope must be inspected prior to each flight.

2.6 Each winch or auto-tow launch cable must incorporate a weak link. In no circumstances should this exceed the weak link strength recommended in the glider's Flight Manual. Where no specific strength is given, maximum strength of the weak link should be approximately one and one-third times the gross weight of the glider being launched. The weak link must be incorporated at the glider end of the cable between the glider and the parachute. For more detailed information see GNZ AC 3-04 Winch & Auto Launch Cable Configuration.

2.7 The pilot must be ready for launch prior to accepting the cable/rope for hook on.

2.8 The launch operator must be aware of the maximum permissible launch speed for the glider and should be briefed on the most suitable launch speed for the type of glider and any other requirements the glider pilot may have.

2.9 The wing runner is responsible for attaching the cable or towrope to the correct tow hook for the type of launch being conducted.

2.10 The pilot is responsible for releasing the cable at any time they consider the safety of the launch is being compromised - e.g. a cable over-run, a wing drop or a veer on the take-off roll.

3. CAA Requirements for Towplane Performance (CAR Part 91.709)

3.1 The take-off distance to clear a 50 foot obstacle with the glider in tow must not exceed 85% of the take-off run available.

3.2 The towplane must be capable of maintaining a rate of climb of at least 200 feet per minute at 1000 feet above the aerodrome with the glider in tow.

4. Particular Requirements for Aerotowing

4.1 The pilot of a towplane must hold a valid Part 61 pilot licence plus a rating for the towplane type and a current glider tow rating issued under Part 61. (Refer Section 2-11 commencing on page 69.)

4.2 The sum of previous aerotowing experience of the tow pilot and glider pilot must total at least ten aerotows as pilot-in-command.

4.3 The standard aerotow position is with the glider in the "high tow" position.

4.4 The direction of turn of the glider on release from an aerotow is right unless terrain or other hazards preclude it. The towplane should normally turn left after release.

4.5 A towplane may not be flown for any purpose not directly connected with the towing of gliders while the rope is attached. In particular, participation in air-to-air photography by a tow aircraft with the rope attached is strictly forbidden.

5. Winch and Auto-tow Launch Requirements

5.1 The affiliate must train and approve launch operators engaged in winch or Auto-tow launching. Winch and Auto-tow launch operators must complete the appropriate syllabus of training contained in Appendix 2-G (page 95) under the direct supervision of a competent person.

5.2 An approved winch/Auto-tow launch operator shall not undertake unsupervised launches unless they have completed at least 3 launches by the same method in the preceding 6 months.

5.3 To help the launch operator to clearly see when the cable is released, the glider end of the cable must be made visible by a parachute. The parachute must not be so large that it could engulf the nose of the glider in the event of a cable break.

5.4 A winch and a vehicle used for auto-tow must be provided with a suitable cage or screen to protect the operator.

5.5 A "safety zone" is to be established around a winch or Auto-tow to ensure people not involved with the operation remain well clear.

5.6 The winch engine must not be run while work is being carried out on a cable.

5.7 Where a multi-drum winch, or more than one winch are in operation and cable runs are closer than 60m apart, only one glider may be attached to a cable at any time. After each launch the used cable must be drawn into the winch before another cable is used.

5.8 All cables are to be treated as "live" during a winch or Auto-tow launch and must not be crossed, touched or stepped on.

6. Launch Signals

6.1 An adequate system of communication is required to exist between the take-off point and the launch operator.

6.2 When telephone or radio is in use, means must exist for an emergency stop signal to be sent which can be received notwithstanding any engine noise. For this purpose a clear, visual signal may be adopted.

6.3 The launch operator must be able to see the glider throughout the launch. A mirror should be used on a tow plane. The design of winch equipment must allow direct visual contact with the glider until the typical release point. For an auto-tow vehicle, an observer may be carried to maintain visual contact with the glider and to relay any signals during a launch.

6.4 Pilots using radio for launch control must use only flexible boom or fixed mounted microphones and press-to-transmit switches located on the control column.

6.5 The person controlling the launch must be trained and authorised as competent by a gliding instructor.

6.6 If visual signals are used, the person controlling the launch should position near the glider's left wing tip and use the following signals:

"Take up slack"	A straight-arm waved side to side across the lower body, at knee height.
"All out"	A straight-arm waved side to side above the head.
"Stop"	A straight-arm held stationary vertically above the head.

6.7 The use of a bat is highly recommended to enhance visibility of the signals described above. Where bats are in use they should be large (60cm or more in diameter) brightly coloured (fluorescent paint, or black and white) contrasting in colour to the normal background, and easily visible at the distance required.

6.8 For aerotow launches, another trained person may be positioned well ahead and to one side of the towplane, (usually to the left) to repeat the visual signals.

6.9 If light signals are used for winch or auto-tow launches, they shall be as follows:

"Take up slack"	White dashes of one and a half seconds duration with a one and a half seconds interval between dashes.
"All out" (launch)	Quick white dots of half a second duration with a half a second interval between dots.
"Stop"	Steady white light.

6.10 Loud verbal confirmation of the signals is to be made by the wing runner to any other party involved in communicating the light signals to the launch vehicle.

6.11 If radio is used for launch control, the launch vehicle must be addressed directly by use of the towing aircraft call sign or the term *"winch"* or *"launch vehicle"* as appropriate, followed by the terminology *"take up slack", "all out"* or *"stop"* as appropriate.

7. Signals During an Aerotow

The following are the standard signals available for use during an aerotow launch:

(a) Towplane to Glider

"Release now"	Tow pilot rapidly and distinctly banks the towplane to the left and right.

(**This is an emergency signal.** The glider **must** release, and having seen the towrope go, the glider is to carry out a turn to the right.)

"Your brakes are open"	Tow pilot oscillates the rudder rapidly, so as to avoid significant yaw of the towplane. Where radios are fitted, a call should also be made to advise the situation.

(b) Glider to Towplane

"I am unable to release"	If radio equipped, remain in the normal tow position and advise the tow pilot of the situation. If no radio contact, the glider pilot moves to left of the towplane and rolls the glider left and right. Once the tow pilot is aware of the problem the glider returns to the normal tow position. The tow pilot will then release the rope from the towplane over the airfield or a suitable landing area.

***Note**: IN AN EMERGENCY, the tow pilot may release the towrope from the towplane without warning at any time, if they consider their safety to be in doubt.*

8. Signals During a Winch or Auto-tow Launch

8.1 Radio may be used to call the glider's speed during a launch. It may also be used to request more or less speed during the launch.

8.2 If not using radio and the airspeed is higher than desired during the launch the pilot should yaw the glider from side to side with the rudder. The nose should be lowered and a safe speed maintained prior to signalling, otherwise the launch should be abandoned. If the airspeed during the launch is too slow, the launch should be abandoned.

9. Combined Aerotow and Winch or Auto-tow Launching

9.1 Where there are mixed launch methods in operation, e.g. aerotow and winch operations, the system of signalling / controlling launches is to be such that signals cannot be confused between operations.

9.2 Aerotow launching must not cross the path of any cable system.

9.3 Simultaneous winch /auto launch and aerotow launches are not permitted unless adequate lateral separation exists to ensure cable separation in the event of a cable drifting and falling in the prevailing wind conditions.

10. Multiple Towing Requirements

10.1 The pilot of the towplane must have carried out a minimum of 100 glider tows.

10.2 Tow pilots and glider pilots are to be approved for multiple towing by the CFI of the affiliate. Pilots-in-Command shall have completed the training syllabus for multiple towing and have a logbook endorsement for the aerotow positions that they are approved for.

GLIDER TOW PILOT RATINGS

1. Introduction

Under its Part 149 Certificate, GNZ is authorised by CAA to conduct courses in towing gliders, to assess competence in towing gliders, and to issue glider tow ratings. This section sets out the relevant CAA Rule requirements and the GNZ procedures for exercising this CAA authorisation.

2. CAA Requirements for Issue of Glider Tow Ratings

61.601 Eligibility Requirements

(a) To be eligible for a glider tow rating a pilot must -

(1) have a minimum of 100 hours as pilot-in-command in an aeroplane; and

(2) have successfully completed a course in towing gliders conducted by a gliding organisation if the organisation's Part 149 certificate authorises the holder to conduct the course; and

(3) have successfully demonstrated competence in the towing of gliders to an appropriately authorised person within a gliding organisation if the organisation's Part 149 certificate authorises the holder to conduct the assessment.

(b) The holder of a current glider tow rating issued by an ICAO Contracting State is deemed to meet the requirements of paragraph (a)(2).

61.603 Issue

(a) If the authorised person who conducted the competency demonstration required by rule 61.601 is satisfied that the pilot complies with rule 61.601, the authorised person may issue the glider tow rating by entering the following statement in the pilot's logbook in accordance with rule 61.29:

I certify that on [date of assessment] [name of pilot and client number] satisfied the requirements of Part 61 of the Civil Aviation Rules for the issue of a glider tow rating [enter the date, full name, signature, and licence number of the flight instructor issuing the rating].

(b) The holder of a glider tow rating issued under paragraph (a) may apply to the Director to have the rating endorsed on the holder's pilot licence.

(c) On receipt of an application under paragraph (b) and payment of the applicable fee, the Director may endorse the pilot licence with the glider tow rating.

(d) To avoid doubt, a statement of endorsement made in a pilot's logbook prior to 15 April 2016 is deemed to satisfy the requirements of paragraph (a) of rule 61.601.

61.605 Privileges and Limitations

A current glider tow rating authorises the holder to act as pilot-in-command of an aircraft on glider tow operations subject to the privileges and limitations of their pilot licence.

[Note that 61.155 permits the holder of a current private pilot licence to act, but not for remuneration, as pilot-in-command or as a co-pilot of an aircraft that is operated for hire or reward to tow a glider in flight, but only if the operation is under the direct control of a gliding organisation, or under the authority of an adventure aviation operator certificate issued by the Director under the Act and Part 115.]

61.607 Currency Requirements

(a) A holder of a glider tow rating must not exercise the privileges of the rating unless, -

(1) within the previous 12 months, the holder has performed at least 6 glider tows; or

(2) within the previous 12 months, the holder has demonstrated competency in accordance with the requirements of rule 61.601(a)(3); and

(3) the authorised person who conducts the competency demonstration certifies the successful completion of the check in the holder's logbook in accordance with rule 61.29.

(b) A pilot who completes the demonstration within 60 days before the date on which it is required is deemed to have completed the demonstration on the required date.

3. Glider Towing with Microlight Aeroplanes

3.1 A microlight aeroplane used for towing gliders must meet the same requirements as other towplanes, as set out in Part 91.709.

3.2 The pilot of a microlight towplane must hold a valid Part 61 pilot licence (ie RPL, PPL or higher), plus a rating for the microlight type and a current glider tow rating issued under Part 61.

3.3 A Part 103 microlight tow rating for towing a hang-glider is not a sufficient qualification for towing gliders in flight.

4. Glider Tow Pilot Instructors

4.1 GNZ glider tow pilot instructors are responsible for training prospective glider tow pilots in accordance with the training syllabus detailed in Appendix 2-H (page 98) and GNZ AC 2-09 Manual of Glider Tow Pilot Training. (This constitutes the course in towing gliders and demonstration of competence required by Rule 61.601(a).)

4.2 The NOO is authorised by the President to approve GNZ tow pilot instructors and will maintain a register of those so approved.

4.3 The qualifications and experience requirements for approval as a GNZ glider tow pilot instructor are contained in GNZ AC 2-09 Manual of Glider Tow Pilot Training.

4.4 GNZ glider tow pilot instructors are authorised to conduct competency assessments and to issue glider tow ratings to pilots following the successful completion of training.

5. Tow Pilot Training and Issue of Glider Tow Rating

5.1 The training of a tow pilot and the issue of a glider tow rating must be carried out only by a glider tow pilot instructor as set out in paragraph 4 above.

5.2 On completion of the issuing statement in the pilot's logbook in accordance with Rule 61.603(a), the glider tow pilot instructor must send a completed form OPS 14 to the relevant ROO for each glider tow rating that they issue. The ROO will then forward the OPS 14 to the NOO for recording purposes.

6. Tow Pilot Responsibility

6.1 The individual tow pilot is responsible for adhering to the various CAR requirements and GNZ procedures governing glider towing operations and the pilot licence held.

6.2 The tow pilot shares a responsibility in ensuring that the pilot they are launching is authorised for the flight they are about to undertake.

FINAL GLIDES and COMPETITION FINISHES

1. Introduction

1.1 The sporting goals of cross country soaring combined with the performance and handling characteristics of gliders allows them to expeditiously complete a task at low level then manoeuvre for a safe landing.

1.2 Competition finishes conducted below a height of 500 feet AGL may be conducted only at an aviation event authorised by the Director in accordance with CAR Part 91.703. Under its CAR Part 149 Certificate, GNZ is delegated by the Director to authorise such aviation events.

1.3 The Contest Director at each event is deemed to be the Flying Display Director in terms of CAA Advisory Circular AC 91-1. The aviation event plan requirements of CAR 91.703(c) are satisfied by:

(a) the GNZ Executive's approval of the place, date and organiser of each event, and

(b) the GNZ competition rules and,

(c) the pilot training and approval process set out below.

1.4 Identification of hazards to aviation safety at aviation events, and ensuring that the associated risks are evaluated and managed is a prime responsibility of the Contest Director. In fulfilling this responsibility, the Contest Director must consult with the Contest Task Setter and the Contest Safety Officer. All identified hazards shall be drawn to the attention of contest participants at the daily contest briefing as deemed necessary in the particular circumstances.

2. Definitions

2.1 **Final Glide.** A Final Glide is a bona-fide circuit-joining manoeuvre conducted in a glider or powered glider as part of a cross-country soaring flight. The glider is positioned from a point away from the place of intended landing to a point overhead or near the place of intended landing from where the circuit can be joined from the standard circuit joining area or via a Competition Finish manoeuvre.

2.2 **Competition Finish.** A competition finish is a circuit manoeuvre performed in a glider or powered glider on completion of the final glide phase of a competition task during an aviation event. The glider orients the final glide to facilitate the crossing of the competition finish line and from there positions for a modified / non-standard circuit to the intended place of landing. The manoeuvre must be conducted in accordance with Para 3 below, the GNZ competition rules, and any further limitations recorded in the pilot's written approval. Flight training or practice for such competition tasks is covered by this definition provided that such training or practice is conducted with the approval of the CFI and according to the affiliate's Standard Operating Procedures.

2.3 **Final Glide and Competition Finish Approval.** A Final Glide and Competition Finish Approval is a written approval, recorded in the pilot's logbook, for that pilot to conduct a final glide and competition finish in accordance with this section and any other limitations that may be contained in the approval.

3. Conduct of Final Glide and Competition Finish Manoeuvres

3.1 The minimum height of any part of the glider during the manoeuvre is 50 feet AGL or a greater height if specified by the Competition Rules, the affiliate's Rules or any other limitation contained in the pilot's approval.

3.2 The glider must not be manoeuvred within 75 metres of people, vehicles, aircraft, buildings or equipment on the ground during the execution of a final glide and competition finish.

3.3 Radio calls are to be made on the appropriate frequency and distance out for the landing site stating position, direction of approach and intentions on crossing the nominated finish line

3.4 The pilot-in-command is responsible for ensuring separation from any other circuit traffic and sequencing with this and other joining traffic.

4. Training

4.1 Training in the conduct of final glide and competition finish manoeuvres is to be in accordance with Appendix 2-I (page 103). This forms a training record and is to be signed as having been completed by the affiliate's Chief Flying Instructor or designated approved gliding instructor.

4.2 The Final Glide and Competition Finish Approval with any conditional limitations is to be certified in the glider pilot's logbook by an appropriately authorised gliding instructor.

FUNCTIONAL CHECKS and TEST FLIGHTS

1. Functional Check Flights

1.1 A functional check flight may be required after routine maintenance or for the issue of an Airworthiness Certificate when the certifying engineer requires the checking of handling qualities, equipment or systems. In such cases, the details and content of such flights will be defined by the certifying engineer and the results reported in such a way as to constitute part of the maintenance records of the glider or powered glider.

1.2 Any suitably experienced and current XCP holder may conduct a functional check flight. For a two-seat glider or powered glider, where checks are required from both seats, both pilots must be XCP holders.

1.3 It is recommended that the following weather conditions be prevailing for the expected duration of any functional check flight:

(a) Nil cloud or a cloud base that allows all manoeuvres to be completed not lower than 1,000 ft AGL in VMC with a flight visibility of at least 8 km.
(b) A distinct horizon.
(c) No significant turbulence.
(d) No significant crosswind for take-off or landing.

2. Test Flights

A glider or powered glider that is a prototype or has undergone major modification likely to affect flight handling or performance will require test flying by a pilot with specialist training. In such cases, the CAA or the approved Design Organisation involved will be responsible for all aspects of the test flight programme, and for assessing the qualifications and experience of the test pilot.

MEDICAL REQUIREMENTS

1. Medical Declarations and Certificates

1.1 No person may act as pilot-in-command of a glider or powered glider unless that person:

(a) Holds a valid GNZ Medical Certificate and Declaration completed on form OPS 01; or

(b) Holds a valid Medical Certificate and Declaration completed on Sport Aviation Corp Ltd (SAC) form #8.2 or on a Recreational Aircraft Association of NZ (RAANZ) medical form in respect of acting as pilot in command of a microlight aircraft, or

(c) Holds a valid NZ CAA Class 1 or Class 2 Medical Certificate or a valid ICAO equivalent; or

(d) Holds a valid Medical Certificate provided on NZTA form DL9, issued in accordance with rule 44(1) of the Land Transport (Driver Licensing) Rule 1999, that is applicable for a Class 2, 3, 4 or 5 driver licence with passenger endorsement; or

(e) Is a visiting foreign pilot and provides evidence of holding an acceptable and valid equivalent to the GNZ Medical Certificate and Declaration.

1.2 Any change of health or existence of a previously undetected medical condition that may affect the validity of the medical certificate or declaration must be declared to the relevant CFI. In such cases, the holder must cease acting as pilot-in-command until a medical practitioner confirms that the certificate is not in fact affected and the CFI so advised.

2. Validity Periods for Medical Declarations and Certificates

2.1 Student Glider Pilot

The validity period for a student glider pilot shall be non-terminating, provided the requirements of paragraphs 1.1 and 1.2 above are complied with.

2.2 Cross-Country Pilot

Provided the requirements of paragraphs 1.1 and 1.2 above are complied with, **the validity period for a Cross-Country Pilot shall be non-terminating, unless they are exercising the privileges of a passenger rating or a gliding instructor rating** in which case the validity period shall be as follows:

(a) 5 years, where the applicant is less than 40 years of age on the date that the medical practitioner signs the certificate; or

(b) 2 years, where the applicant is 40 years of age or more on the date that the medical practitioner signs the certificate.

3. Recording

3.1 Each person seeking to rely on the medical requirements above must provide a copy of the relevant Medical Certificate and Declaration, or copy of the CAA or ICAO Medical Certificate as the case may be, to the relevant CFI.

3.2 A copy of each Medical Certificate and Declaration held by the CFI must be available on demand for inspection by the ROO, NOO or an officer of the CAA.

GNZ POLICY ON SOLO FLIGHTS

1. GNZ has established the following policy with respect to solo flights. This policy is in addition to the existing requirements of the Civil Aviation Rules and the GNZ Manual of Approved Procedures.

2. Part 104.5(a)(2)(ii) permits a person, younger than 16 years of age, to be the pilot of a glider provided they are 'individually authorised for each flight by an A or B category glider instructor'. This means that anyone under 16 years of age may be sent solo. Before anyone is sent solo, regardless of their age, they must have completed all aspects of ab-initio glider training. However, as the student's age decreases it can be expected that an early solo may attract significant national and international interest.

3. GNZ considers that the provisions of Part 104.5(a)(2)(ii) can be used for solos at organized training camps, such as Air Training Corps, and for GNZ affiliate students, where the student is aged 14 years or over.

4. GNZ also recognizes that there will occasionally be exceptional cases where students younger than 14 years of age may be competent for solo flight. In order to ensure that such a student is provided with the level of care that is desired, the following guidelines are provided for the CFI of the affiliate concerned:

   (a) **The student is required to be assessed for competency for solo by either the NOO, a ROO, or the CFI or an A Category gliding instructor from another affiliate. This is to ensure that an independent opinion is provided as to the overall capability of the student to safely fly solo.**

   (b) The GNZ President, the NOO, the appropriate ROO, and the Chairman of the Membership Development Committee are to be advised of the pending solo at least one week prior to the event. This will ensure that there is prior communication and awareness that a solo, that may attract media and CAA interest, is shortly to occur. This will ensure that GNZ is informed and able to provide appropriate comment on the flight if asked to do so.

GLIDER KNOWLEDGE: SYLLABUS OF TRAINING AND EXAMINATION

1. The candidate shall receive instruction in accordance with the following sections that form this appendix:
   (a) Solo Pilot
   (b) Soaring Pilot
   (c) Cross-Country Pilot (XCP)
   (d) Task Pilot
   (e) Alpine Pilot
2. Completion of training is to be recorded via check-boxes on the appropriate sheets as follows:
   (a) Self-Prepared – the pilot signs this check-box when they have read and understood the topic as presented in the training programme.
   (b) Reviewed – the pilot has discussed the topic with an Instructor (trainer) to ensure clarity of understanding. The instructor signs the check-box to indicate this.
   (c) Completed – the Instructor (trainer) signs off this check-box once the pilot has demonstrated the pass standard.
3. The sequence of exercises is a guide only. Several exercises may be covered during any given flight.
4. The following syllabus sheets form the training record for each pilot and shall be retained for a period of 3 years after completion. They must be available for inspection by an Officer of the CAA or a GNZ Operations Officer or the GNZ Quality Manager if required.
5. Candidates are required to be examined in, and to have a broad knowledge of, the following:
   (a) The Civil Aviation Act, 1990, the Civil Aviation Rules, especially Parts 91 and 104, and the GNZ MOAP relating to the operation of gliders and powered gliders, including pertinent air traffic service practices and procedures.
   (b) The elementary principles of aeronautical charts and navigation.
   (c) The elementary principles of aeronautical meteorology including factors affecting glider flying.
   (d) The elementary principles of theory of flight and glider limitations and performance.
   (e) The basic principles of glider construction.
   (f) Operator responsibilities for glider maintenance.
   (g) Safety practices and emergency procedures relevant to gliding operations.
   (h) Human Factors relating to the operation of gliders.
   (i) Radio and transponder procedures.
6. Written examination papers covering the syllabi of paragraph 5(a) to (h) above are held in confidence and administered by the CFI of the relevant GNZ affiliate.
7. Written examination of radio and transponder procedures may be conducted by instructors using questions from the pool contained in GNZ AC 2-11, Radio Procedures. Alternatively, this written examination requirement may be satisfied by the candidate having a valid written examination credit from Aviation Services Ltd in FRTO Flight Radiotelephony.
8. The prime source of study material resides in GNZ's Flight Training Programme online at http://training.gliding.co.nz/.
9. Note that during the transition to the new training programme, the "legacy" training syllabus may be used and will remain on the GNZ web site at http://gliding.co.nz – navigate from the Home page **FOR PILOTS>Glider Pilot Training> Training Syllabus.**

Flight Training Record of Progress - Form Revision 3.61 – 01 July 2020 Descriptions are at training.gliding.co.nz

1. SOLO PILOT

Name

	Self-Prepared	Reviewed	Date	Completed	Date
Self-Preparation					
Logbook and Training Record					
Airfield and Safety Rules					
Glider Familiarisation					
Ground Handling + Retrieving					
Launch Point Procedures					
Human Factors 1: I'M SAFE					
Join a Club Roster					
Aircraft Handling					
Taking Control / Handing Back Control					
Effects of Controls (All)					
Cockpit Check Lists					
Lookout, Habit of Active Scanning					
Straight Flight, Use of Trimmer					
Coordinated 90° Turn, 30° Bank					
Circuit and Landing					
Circuit - Standard Pattern					
Circuit - Steady Speed (Target ±5 kts)					
Approach Control, Aiming Point					
Roundout and Smooth Touchdown					
Circuit Too Close In / Cramped					
Circuit Too Far Out					
Circuit Started Too High					
Running Out of Height in Circuit					
No-Instrument Flight and Landing					
Baulked Approach					
Balloon / Bounce Recovery					
Minimum Speed, Unusual Attitude					
Basic Stall Recognition, Wings Level					
Effect of Turning + Brakes on Stall Speed					
Safe Speed Near the Ground					
Wing Drop Stall and Recovery					
Demonstrate of a 1-Turn Spin					
Spiral Dive vs Spin					
Launch *(one method required for solo)*					
Competent at Aerotow Launch					
Launch Signals - Aerotow					
Launch Failure Exercises - Aerotow					
Competent at Winch Launch					
Launch Signals - Winch					
Launch Failure Exercises - Winch					
Almost There					
Demo Crosswind Launch/Land					
Medical Declaration					
10 Oral Questions Answered					
First Solo Flight					

Flight Training Record of Progress - Form Revision 3.61 – 01 July 2020 Descriptions are at training.gliding.co.nz

Name

2. SOARING PILOT

	Self-Prepared	Reviewed	Date	Completed	Date
Self-Preparation					
Responsibilities of Pilot in Command					
Human Factors 2: Attitude to Risk					
Daily Inspection Approval					
Glider Flight Manual					
GNZ Manual of Approved Procedures					
Radio Phraseology and Use					
Operator Maintenance Permitted					
Local Landmarks within 10km					
Aircraft Handling					
Lookout – Consistent and Effective Scan					
360° Turns at 45° Bank					
Review of Slip, Skid, Yaw					
Use of Camber-Changing Flaps					
Flight at Higher Speeds, Polar Curve					
Circuit and Landing					
Circuit - Steady Speed (±3 kts)					
Side-Slip on Approach, Slipping Turn					
Cross-Wind Landing					
Strong Wind Landing					
Factors Affecting Landing Distance					
Minimum Speed, Unusual Attitude					
Wing Drop Stall Consolidation					
Full Spin Consolidation					
Review Spin vs Spiral Dive					
Lazy Eight Manoeuvre					
Launch Review & Consolidation					
Aerotow - Consolidation					
Aerotow - Signals and Emergencies					
Winch - Consolidation					
Winch - Signals and Emergencies					
Soaring Techniques					
Conditions for Soarable Weather					
Thermal Techniques					
Ridge Techniques					
Wave Techniques					
Cloud Hazard					
Anticipation					
Dual Cross-Country Flight					
Simulated Out-Landing					
10 Oral Questions Answered					
Convert to Single Seat Glider					
Cleared Off Check Flights					
Solo Soaring Flight 90 Minutes					

Flight Training Record of Progress - Form Revision 3.61 – 01 July 2020 Descriptions are at training.gliding.co.nz

Name

3. CROSS-COUNTRY PILOT

	Self-Prepared	Reviewed	Date	Completed	Date
Self-Preparation					
Map Reading and Local Airspace					
Hydration and In-Flight Relief					
Parachute Use & Maintenance					
Field Selection from Air (7S's)					
Maintenance Manual and Rules					
Aircraft Handling					
Rig & De-Rig, Prep for Road Retrieve					
Rapid Descent					
Benign Spiral Mode					
Safe Circling Against a Ridge					
Circuit and Landing					
Landing on Sloping Ground					
Downwind Landing / Ground Loop					
Reduce Speed on Stablised Approach					
Soaring Techniques					
Accurate Centering Technique					
Safe Gaggle Flying Etiquette					
Factors Affecting Gliding Distance					
Preparation for 50 km X/C Flight					
Soar/Land Decision-making, 3-2-1 Rule					
Plan Route for 50 km Flight					
Identify Landable Areas On Route					
Operate GPS Navigation Device					
Transponder Operation					
Flight in Controlled Airspace					

Study Course and Examinations	Study Guide	Date	Exam Pass	Date
Human Factors and Flight Safety (HF)				
Aviation Law and Rules (Law)				
Meteorology for Glider Pilots (Met)				
Air Navigation and Airmanship (Nav)				
Radio Phraseology and Procedures (Rad)				
Glider Technical Knowledge (Tech)				

Anticipation	Completed	Date
Dual Flight in GNZ Competition		
Dual Flight in Mountain Wave		

Almost There	Self-Prepared	Reviewed	Date	Completed	Date
Field Selection + Outlanding - Dual					
Supervised Field Outlanding - Solo					
25 hours as Pilot in Command					
Flight Test for Passenger Rating					
Cleared to Fly Cross Country					
Solo XC Flight - 50 km between 2 points					

Flight Training Record of Progress - Form Revision 3.61 – 01 July 2020 Descriptions are at training.gliding.co.nz

Name

4. TASK PILOT

	Self-Prepared	Date	Completed	Date
Self Preparation				
Hydration, Nutrition, Fatigue				
Turnpoint Database, VNC Maps				
FAI Badge Requirements, Task Rules				
GNZ Contest Rules & Scoring System				
Documents to be Carried in Aircraft				
Retrieve Vehicle, Trailer, Crew				
Visual Illusions and Deceptions				
Aircraft Handling				
Glider Preparation for Task Flying				
Efficient Flying Techniques				
Use of Water and Trim Ballast				
Dual Aerotow				
Circuit and Safe Landing				
Landing with Many Gliders in Circuit				
Cockpit Checks at Task End				
Accurate Final Glide to Finish				
Aerotow Retrieve after Out-Landing				
Soaring Techniques				
Using Convergences and Fronts				
Optimal Cross-Country Speed				
Dolphin Flight Along Energy Lines				
Tasks and Navigation				
Principles of Task Setting				
Configure Nav Computer, Enter Task				
Navigate to a Point using GPS				
Start and Finish Options				
Download and Review Flight Log				
Upload Flight to On-Line Contest				
Risk Management and Safety				
Collision Avoidance Systems				
Flight Following Procedures				
Flying Open Class Gliders				
Incident and Accident Reporting Rules				
Just Culture & Attitude to Reporting				
Anticipation				
Rehearse Action in Event of Mid-Air				
Rehearse Landing in an Emergency				
Plan Actions After an Outlanding				
Survival in Bush and Mountains				
Rehearse Parachute Descent				
Almost There				
Complete a Task at a GNZ Contest				
Gold Distance Flight 300 km				

Name

5. ALPINE PILOT

	Self-Prepared	Date	Completed	Date
Self Preparation				
Attend Course in Mountain Flying				
Attend Hypobaric Chamber Course				
High Altitude Physiological Effects				
Oxygen Systems and Handling				
Cockpit Security In Turbulence				
Impact of Temperature on Glider				
Wave and Convergence Theory				
Altitude AMSL vs Flight Level				
Aircraft Handling				
Launching in Wave Conditions				
Don't Hit The Mountain - Review				
Turbulence / Unusual Attitude Recovery				
IAS / TAS / Overspeed / Flutter				
Circuit and Safe Landing				
Assessing Valley Winds for Landing				
Avoiding Turbulent Landing Areas				
Securing Glider on Ground in Wind				
Soaring Techniques				
Flight Close to Ridge in Anabatic Lift				
Locating Thermals in the Mountains				
Finding and Using Mountain Wave				
Jumping Wave Lines - Fwd/Back				
Safe Techniques for Crossing Saddles				
Using Convergences in Mountains				
Climbing in Rotor Under a Wave				
Navigation and Instruments				
Identifying Alpine Landing Areas				
Airspace Use in Strong Climb/Descent				
Battery Performance at Low Temp				
Preventing Instrument Problems				
MBZ Areas, Common Landmarks				
Flight Following and Being Traced				
Things to Think About				
Inadvertent Entry into IMC				
Collision Risk on Energy Lines				
Battery Fail in Controlled Airspace				
Airbrakes Jammed Open or Closed				
Transponder Emergency Codes				
Hypoxia, Hyperventilation Checks				
Water Ballast Under Icing Conditions				
Survival Equipment and Plans				
Other Traps in Alpine Flying				
Solo Alpine Flight to Aoraki / Mt Cook				

POWERED GLIDER KNOWLEDGE: SYLLABUS OF TRAINING AND EXAMINATION

1. Note that candidates must hold a GNZ XCP certificate to be eligible for a logbook endorsement for a self-launching powered glider. (A powered glider endorsement is not required for operating gliders with sustainer motors only, but type instruction from a suitably qualified gliding instructor is still required.)

2. The candidate seeking log book endorsement for a self-launching powered glider shall receive instruction in accordance with the following sections that form this appendix:

   (a) Ground Training Syllabus

   (b) Flight Training Syllabus

3. Completion of training is to be recorded on the appropriate sheets. Instructors shall initial in the "Brief" column when the item is first briefed, taught or demonstrated. The "Comp" column is initialled and dated when the pupil is considered competent.

4. The sequence of exercises is a guide only. A number of exercises may be covered during any given flight.

5. The attached sheets form the training record for each pilot and shall be retained for a period of 3 years after completion. They must be available for inspection by an officer of the CAA if required.

6. Candidates are required to be examined in, and to have a broad knowledge of, the following:

   (a) The Civil Aviation Act, 1990, the Civil Aviation Rules, especially Parts 91 and 104, and the GNZ Manual of Approved Procedures relating to the operation of gliders and powered gliders, including pertinent air traffic service practices and procedures.

   (b) The elementary principles of aeronautical charts.

   (c) The elementary principles of aeronautical meteorology including factors affecting glider flying.

   (d) The elementary principles of theory of flight and powered glider limitations.

   (e) The basic principles of powered glider construction.

   (f) Safety practices and emergency procedures relevant to powered gliding operations.

   (g) Human Factors relating to the operation of powered gliders.

7 GNZ Advisory Circular AC 2-14 Powered Glider Basic Aeronautical Knowledge provides sufficient material to prepare applicants for examination. Club CFI's have access to a suitable examination paper.

GROUND TRAINING SYLLABUS FOR POWERED GLIDERS

Name: _____

Affiliate: _____

	Brief	Comp	Date		Brief	Comp	Date
Power Glider Operations				**Principles of Flight**			
Use of this Training Record				Forces (Lift, Drag, Thrust, Wt)			
Engine & Glider logbooks				S&L under power			
Maintenance schedules				Climbing with power			
Weight and balance				Descending with power			
Ground towing / handling				Turning under power			
Securing / picketing				Stalling			
Rigging and derigging				T/o performance			
Refuelling procedures				Landing performance			
Daily Inspection (DI)				Stability and control			
Use of airspace				Propellers			
Power Glider Systems							
2 stroke engine design / ops				Fuel systems			
4 stroke engine design / ops				Carburettor systems			
Propellers				Electrical systems			
Extension / retraction system				Engine instrumentation			
Ignition systems				Emergency equipment			

POWERED GLIDER FLIGHT TRAINING SYLLABUS

Name: _____

Affiliate: _____

	Brief	Comp	Date
FLIGHT PREPARATION			
- Glider famil			
- Documentation			
- Pre Flight DI			
- Engine starting / warm-up			
- Power check			
GROUND HANDLING			
- Use of power			
- Directional control			
- Use of brakes			
CONTROLS			
- Effects of slipstream			
- Engine controls			
- Propeller controls			
TAKEOFF WITH POWER			
- Pre take off checks			
- Launch procedure			
- Ground roll / lift off			
- Normal climb			
- Engine shutdown / retraction			
- Launch in crosswinds			
POWERED FLIGHT			
- Straight and Level			
- Turning			
- Cruise			
- Climbing			
- Descending			
- Effect of configuration			
STALLING			
- HASELL checks			
- Stall recognition/recovery			
- Stall – power on / power off			
- Stall in take off configuration			
- Stall in approach config'ns			
- Incipient spin & recovery			
- Full spin & recovery			
- Spiral dive & recovery			

	Brief	Comp	Date
CIRCUIT & LANDING			
- Normal: engine stowed			
- Pre landing checks (SUFB)			
- Landing with engine at idle			
- Go around with power			
- Landing in crosswind			
ADVANCED EXERCISES			
- Short take off			
- Short landing			
- Max rate climb			
- Max angle climb			
- X/C cruising			
SITUATIONAL AWARENESS			
- Lookout / scanning			
- Right of way / etiquette			
- Use of airspace			
- Out landing decision making			
- Safety around propellers			
NON-NORMAL SITUATIONS			
- Low acceleration on t/o			
- Low level launch failure			
- Engine failure on approach			
- Fire in flight			
- Carburettor icing			
- Engine control failures			
- Engine limit exceedance			
- No instrument circuit			
- CO contamination /poisoning			
SOLO OPERATIONS			
- Responsibilities as PiC			

LOGBOOK SIGN-OFF			
- 3 Safe solo flights			
- Multi-choice exam			

GLIDING INSTRUCTOR: SYLLABUS OF TRAINING

1. The Trainee Instructor shall receive instruction in accordance with the following sections that form this appendix:

   (a) Instructional Techniques Theory

   (b) Ground Instructional Techniques Training Syllabus

   (c) Airborne Instructional Techniques Training Syllabus

2. Completion of training is to be recorded on the appropriate sheets. Instructor Trainers shall initial in the "Brief" column when the item is first briefed, taught or demonstrated. The "Comp" column is initialled and dated by the Instructor Trainer when the trainee is considered competent. On completion of the relevant training, logbook endorsements are to be used by the Instructor Trainer to state what exercises the instructor is qualified to provide instruction in.

3. The attached sheets form the Instructor's training record and instructors under training are responsible for maintaining their own sheets until they are completed and handed to their CFI for record keeping purposes. (For more information on retention of training records, see paragraph 8 on page 19.)

4. Candidates are required to have a broad knowledge of, the following:

   (a) The Civil Aviation Act, 1990, the Civil Aviation Rules and the GNZ MOAP relating to the operation of gliders and powered gliders, including pertinent air traffic service practices and procedures.

   (b) The principles of aeronautical charts.

   (c) The principles of aeronautical meteorology including factors affecting glider flying.

   (d) The principles of theory of flight and glider limitations.

   (e) The principles of glider construction.

   (f) Safety practices and emergency procedures relevant to gliding operations.

   (g) Human Factors relating to the operation of gliders.

   (h) Theory of learning, ground instruction and airborne instructional techniques.

   (i) The role and responsibilities of gliding instructors.

INSTRUCTOR TRAINING SYLLABUS
INSTRUCTIONAL TECHNIQUES THEORY

Name: _____

Affiliate: _____

Trainers: Initial in "Brief" column when topic is first briefed, taught or demonstrated. Initial in "Comp" column and put date when Trainee Instructor has demonstrated a satisfactory understanding of the topic and can apply the skills in an effective manner.

	Brief	Comp	Date		Brief	Comp	Date
Administration				**Airborne Instructional Technique (IT)**			
Training requirements				Handover / takeover of control			
Use of this training record				Following through			
				Showing			
Learning Theory				Demonstration			
How people learn				Teaching			
Principles of instruction				Student practice			
Instructional techniques				Fault analysis			
Effective communication				**Remote Instruction Techniques**			
Barriers to communication				Pair flying			
Lesson planning				Lead / follow techniques			
Briefings				**Debriefings**			
Do's and Don'ts				Do's and Don'ts			
Pre-flight briefings				Post flight debriefings			
				Providing motivation			
Use of Training Aids (see Note 1 below)				**Instructor Responsibilities**			
- blackboard				Limits of rating held			
- whiteboard				Role model			
- magnetic board				Supervision			
- overhead projectors (OHP)				Making logbook entries			
- slides				Discipline			
- video				**Instructional Techniques for Check Flights**			
- notes / diagrams				Conduct and techniques			
- models				Assessing pilots			
- computers				Further training			

Note 1. It is not necessary for a new instructor to complete training in the use of all aids listed. They should be proficient with the use of sufficient training aids to complete the training exercises their Instructor Category allows

GROUND INSTRUCTIONAL TECHNIQUES TRAINING SYLLABUS

Name: _____

Affiliate: _____

Trainers: Initial in "Brief" column when topic is first briefed, taught or demonstrated. Initial in "Comp" column and put date when Trainee Instructor has demonstrated a satisfactory understanding of the topic and can apply the skills in an effective manner.

	Brief	Comp	Date		Brief	Comp	Date
Teaching The Ground Training Exercises							
Use of Training Record				Airfield familiarisation			
Use of logbook				Timekeeping			
Daily club operations routine				Intro to use of radio			
Removal of gliders				Safety on the airfield			
Cleaning gliders				1st aid / Fire / Accident plan			
Ground towing / handling				Launch procedures			
Securing / picketing gliders				Refuelling procedures			
Rigging and de-rigging				Overview of GNZ			
Intro to Daily Inspection (DI)				Intro to Club Rules			
Local airspace				Intro to the MOAP			

AIRBORNE INSTRUCTIONAL TECHNIQUES TRAINING SYLLABUS

Name: _____

	Brief	Comp	Date
Teaching Air Experience / Familiarisation Flying			
- Glider familiarisation			
- Fitness for flight (I'M SAFE)			
- Strapping in and comfort			
- Local area famil/orientation			
- Pre t/o checks (CB SIFT BEC)			
- Lookout / scanning intro			
Teaching Use of Flying Controls			
- Handing/taking over control			
- Principles of flight			
- Effects of control (Primary)			
- Effects of control (Secondary)			
- Turns (up to 30° A o B)			
- Straight and Level			
- Use of trim			
- Use of airbrakes			
Teaching Aerotow Launch			
- Launch procedure			
- Ground roll			
- Lift off / initial position			
- Normal high tow position			
- Release			
- Out of position recovery			
- Launch in crosswinds			
- Launch failure demo			
Teaching Wire Launch			
- Launch procedures			
- Ground run & lift-off			
- Rotation and safety climb			
- Full climb			
- Top of climb / release			
- Signals / calls for speed			
- Launch in crosswinds			
- Launch failure recovery			
Sending Pupils Solo			
- Medical requirements			
- Responsibilities as PiC			
- Handling & performance			
- 3 safe solo flights			
-Oral question exam to Ac2-03			
- Filing syllabus forms			

	Brief	Comp	Date
Teaching Circuits			
- Wind assessment			
- Safe speed near the ground			
- Joining			
- Pre-landing checks (SUFB)			
- Downwind / base leg			
- Final approach / aim point			
- Flare / landing			
- Bounce recovery			
- Correcting if low			
- Correcting if high			
- Landing in crosswind			
- Baulked approach			
Teaching Situational Awareness			
- Lookout / scanning			
- Collision avoidance			
- Right of way / etiquette			
- Use of radio			
Teaching Stalling			
- HASELL checks			
- Reduced G famil			
- Slow speed handling			
- Stall recognition/recovery			
- Stall avoidance			
- Stall with brakes out			
- Stall in a turn			
- Incipient spin & recovery			
- Full spin & recovery (demo)			
- Spiral dive & recovery			
Teaching Non-Normal Situations			
- Low acceleration on takeoff			
- Brake out signal			
- Wave off signal			
- Release hang-up			
- Aerotow upset			
- No instrument circuit			

AIRBORNE INSTRUCTIONAL TECHNIQUES
TRAINING SYLLABUS (CONTINUED)

Name: _____

	Brief	Comp	Date
Teaching Circuit Consolidation			
- Cross-wind circuits			
- High wind circuits			
- Wind gradient/turbulence			
- Joining variations			
- Steep / shallow approaches			
- Landing performance			
- Simulated out landing			
- Use of radio			
Teaching Stalling Consolidation			
- Review of symptoms			
- In turns			
- In approach configuration			
- Effect of slip / skid			
Teaching Spinning			
- Causes			
- Recognition			
- Recovery			
Teaching Spiral Dives			
- Recognition			
- Recovery			
Teaching Handling Exercises			
- Steep turns			
- Side slipping - straight			
- turning			
- brakes out			
- Manoeuvring up to V_R			
- Low aerotow position			
- Boxing tow slipstream			

	Brief	Comp	Date
Teaching Thermal Soaring			
- Lift sources / types			
- Entry / exit			
- Centering techniques			
- Min sink / max L/D			
- Rules / etiquette			
- Speed / AoB			
- Use of varios			
- “Safe gliding distance”			
Teaching Ridge Soaring			
- Mountain / ridge safety principles			
- Rules / etiquette			
- Optimum speed / height			
- Turbulence / gust stalling			
- Cloud formation / avoidance			
- Visual illusions			
Teaching Type Conversions			
- Flight manual review & DI			
- Aircraft & cockpit famil			
- Handling exercises			
- Rig / Derig			
Teaching Non-normal Situations			
- Brakes jammed open			
- Brakes jammed closed			
- Flight in rain			
Teaching Incident Reporting Procedures			
- Requirements for reporting			
- How to report			
- Follow-up action			

- 30 minute soaring flight			
- DI practical			
- Oral question exam to AC2-03			

AIRBORNE INSTRUCTIONAL TECHNIQUES
TRAINING SYLLABUS (CONTINUED)

Name: _____

	Brief	Comp	Date
Teaching Cross-country Soaring			
- Weather appreciation			
- Improving climb performance			
- Speed to fly			
- Glider preparation			
- Personal preparation			
- Maps / airspace			
- Airborne navigation			
- Use of GPS (as applicable)			
- Turnpoint turns			
- Flight in controlled airspace			
- Position reporting			
- Lost procedure			
Teaching Outlandings			
- Decision making			
- Field selection (6 S's)			
- Circuit planning			
- Correcting High / Low circuit			
- Landing on sloping ground			
- Outlanding dual / solo			
Teaching Retrieves			
- By road - trailer towing			
- Aerotow - rules			
- briefing			
- x/c towing			
- descent on tow			
Teaching Flying At High Speeds			
- Effects of controls			
- Rough air			
- Flight at V_{NE}			
- Use of airbrakes			

	Brief	Comp	Date
Teaching Rapid Descents			
- Controlled spiral			
- Use of brakes / flaps			
Teaching Final Glides To Circuit Height			
- Review of glide performance			
- Effect of lift / sink			
- Effect of wind			
- Action if low on glide			
- Action if high on glide			
- Ht loss / dist flown / 1000'			
- Radio procedures			
- Circuit joining			
Teaching Non-normal Situations			
- Loss of canopy			
- Mid air collision			
- Bale out / use of parachute			
- Inadvertent IMC			
- Flutter			
- Control malfunction			
- Ground looping			
Teaching Flying With Passengers			
- Rules / responsibilities			
- Briefing passengers			
- Orientation			
- Rapid descents			
- Front seat considerations			
- Back seat considerations			
- Air sickness			

XCP			
- Min requirements for XCP			

AIRBORNE INSTRUCTIONAL TECHNIQUES TRAINING SYLLABUS (CONTINUED)

Name: _____

	Brief	Comp	Date		Brief	Comp	Date
Teaching Badge Flying				**Teaching Aerobatics**			
- Sporting code				- Rules			
- Task selection				- Glider limitations			
- Planning & map preparation				- Human G tolerance			
- Declaration				- Glider preparation			
- Barographs & cameras				- Unusual attitudes / recovery			
- 2 hour flight				- Wingover			
- 3 hour flight				- Chandelle			
- 4 hour flight				- Loop			
- 50 km cross-country (x/c)				- Stall turn			
- 100 km x/c task				- Half roll			
- 200 km x/c task				- Barrel roll			
- Height gains				- Inverted flight			
Teaching Competition Flying				- Sequences			
- Crewing				**Teaching Display Flying**			
- Race tuning / ballasting				- Rules			
- Gridding and launch				- Fitness / attitude			
- Start procedures / tactics				- Site/sequence planning			
- Navigation / deviations				- Energy management			
- Turnpoints				- Low level clearance			
- Decision making / risks				**Teaching Instrument Flying**			
- Competition finishes				- Rules / airspace			
- Heat stress / dehydration				- Inst theory / limits / failures			
- Fatigue				- Scanning / S&L / turns			
Teaching High Altitude Soaring				- Human balance system			
- Conditions for wave				- Leans & disorientation			
- Launch in wave conditions				- Unusual attitude recovery			
- Soaring rotor				- Emergency descent			
- Crossing waves				- Spin / spiral dive			
- Cloud formations / gaps				- Icing / turbulence			
- IAS/TAS/flutter/turbulence							
- Airspace				**Teaching How To Perform Functional Check Flights**			
- Navigation				- Pre-flight preparation			
- Hypoxia / hyperventilation				- Flight manoeuvres			
- Oxygen systems				- Post flight reporting			
- Effects of reduced pressure				**Teaching Multiple Towing**			
- Cold stress / hunger stress				- Performance requirements			
- Vision				- Briefing / set up / signals			
- Cold soak considerations				- T/O initial tow position			
- Carriage of passengers				- High / low position on tow			
Teaching Formation Flying				- Release			
- Rules / briefings				- Non-normal situations			
- Station keeping				- Cleared for short rope			

INSTRUCTOR TRAINERS: SYLLABUS OF TRAINING

1. The task of training new gliding instructors and providing ongoing training to rated gliding instructors shall be performed by Instructor trainers who complete the training in accordance with the following sections that form this appendix:

   (a) Teaching Ground Instructional Techniques

   (b) Teaching Airborne Instructional Techniques

2. Completion of training is to be recorded on the appropriate sheets. Instructors shall initial in the "Brief" column when the item is first briefed, taught or demonstrated. The "Comp" column is initialled and dated by the Instructor when the pupil is considered competent.

TEACHING GROUND INSTRUCTIONAL TECHNIQUES TRAINING SYLLABUS

Name: _____

Affiliate: _____

	Brief	Comp	Date		Brief	Comp	Date
Training Administration				**Teaching Airborne Instructional Technique (IT)**			
Training requirements				Handover / takeover of control			
Use of this training record				Following through			
				Showing			
Teaching Learning Theory				Demonstration			
How people learn				Teaching			
Principles of instruction				Student practice			
Instructional techniques				Fault analysis			
Effective communication				**Teaching Remote Instruction Techniques**			
Barriers to communication				Pair flying			
Lesson planning				Lead / follow techniques			
Teaching Briefings				**Teaching Debriefings**			
Do's and Don'ts				Do's and Don'ts			
Pre-flight briefings				Post flight debriefings			
				Providing motivation			
Teaching Use of Training Aids				**Teaching Instructor Responsibilities**			
- blackboard				Limits of rating held			
- whiteboard				Role model			
- magnetic board				Supervision			
- overhead projectors (OHP)				Making logbook entries			
- slides				Discipline			
- video				**Teaching Instructional Techniques for Check Flights**			
- notes / diagrams				Conduct and techniques			
- models				Assessing pilots			
- computers				Further training			

TEACHING AIRBORNE INSTRUCTIONAL TECHNIQUES TRAINING SYLLABUS

Name: _____

Affiliate: _____

	Brief	Comp	Date		Brief	Comp	Date
Teaching IT For Air Experience / Famil. Flying				**Teaching IT For Use of Flying Controls**			
- Glider familiarisation				- Handing/taking over control			
- Fitness for flight (I'M SAFE)				- Principles of flight			
- Strapping in and comfort				- Effects of control (Primary)			
- Local area famil/orientation				- Effects of control (Secondary)			
- Pre t/o checks (CB SIFT BEC)				- Turns (up to 30° A o B)			
Teaching IT For Stalling				- Straight and Level			
- HASELL checks				- Use of trim			
- Reduced G famil				- Use of airbrakes			
- Slow speed handling				**Teaching IT For Circuits**			
- Stall recognition/recovery				- Wind assessment			
- Stall avoidance				- Safe speed near the ground			
- Stall with brakes out				- Joining			
- Stall in a turn				- Pre-landing checks (SUFB)			
- Incipient spin & recovery				- Role playing the student			
- Full spin & recovery (demo)							
Teaching IT For Other Airborne Exercises				**Training / Upgrading Instructors**			
- New Training Packages				- Training D Cat's			
- Mutual Flying				- Training C Cat's			
- Role playing a student				- Training B cat's			
- Developing pilot judgement				- Training A Cat's			

Flight Training Record of Progress - Form Revision 3.61 – 01 July 2020 Descriptions are at training.gliding.co.nz

WINCH DRIVER

Name

	Self-Prepared	Reviewed	Date	Completed	Date
Preparation					
Three Glider Flights by Winch					
Basic Theory of Winch Launching					
Read Winch Operating Manual					
Safety Precautions with Cables					
Daily Inspection, Review Log Book					
Towing Winch Behind Vehicle					
Setup					
Winch Setup on Field					
Parachute and Strop Inspection					
Cable Car Checks					
Cable Car Driver Briefing					
Authority and Responsibilities					
Clear Area Around Winch					
Liaison with Launch Point					
Passengers and Observers in Cab					
Winch Driving					
Winch Controls, Hand Locations					
Throttle Guide, Use of Throttle					
Radio Phraseology					
Signal Lights + Glider Signals					
Engine Temperature Management					
Normal Launch Procedure					
Cable Stopped Before Landing					
Review of Emergency Stop					
Rehearse Use of Guillotine					
Solo in Cab					
Handling Non-Normal Situations					
Launching in Tail Wind					
Launching in Cross Wind					
Cable Retrieve After Failed Launch					
Cable Loops, Check after Braking					
Winch Power Failure: Simulated or Real					
Cable Hangup Procedure					
Other Procedures					
Action if Cables Not Towed Straight					
Cable Retrieve from Mid Field					
Closing Down at End of Day					
Reporting Winch Defects					
Winch Refuelling					
Maintenance and Repair					
Cable Splicing - Loop and In-Line					
Change Broken Weak Link					
Change Strops and Traces					

THIS PAGE INTENTIONALLY BLANK

AUTO-LAUNCH VEHICLE DRIVER TRAINING SYLLABUS

DRIVER NAME _____

INSTRUCTOR NAME _____

GLIDING ORGANISATION _____

EXERCISE	BRIEFING (DATE)	PROFICIENT (SIGN & DATE)
AUTO-LAUNCH VEHICLE DRIVING		
Location and use of Safety Gear		
Use of Guillotine / Release System		
Check of the Auto-Launch Vehicle Logbook		
DI of Auto-Launch Vehicle		
Auto-Launch Vehicle Operating Area		
Start, Warm-up and Shut-down		
Wire Check and Fixing Breaks		
Rigging Safety Links		
Parachute		
Tow-out of Cable		
Use of Brake		
Radio and Signal Procedures		
Taking up Slack		
All Out and Initial Climb		
Speed Control		
Top of Launch		
Release And Wire Recovery / Retrieve		
Launch With Crosswinds		
Simulating Launch Failures		
Changing Auto- Launch Vehicle Driver: Briefing		
NON-NORMAL SITUATIONS		
Wire Break at Low Level		
Wire Break in Full Climb		
Wire Break at Top of Launch		
Power Failure		
Launch Hang-up		

INSTRUCTOR SIGNATURE _____ **DATE** _____

GLIDER TOW RATING
TRAINING SYLLABUS

TOW PILOT CANDIDATE ASSESSMENT SHEET

PILOT NAME _____ DATE_____

INSTRUCTOR NAME_____

EXERCISE	ASSESSMENT	COMMENT
Pre-flight		
Start up		
Radio work		
Taxiing - speed / control position		
Run up		
Pre take-off checks		
Speed and directional accuracy on climb-out		
After take-off checks (include T's & P's)		
Level out - smoothness and accuracy		
Trim		
Lookout		
Balance in turns		
Downwind checks		
Speed control in turns		
Speed control on finals		
Flare		
Landing		
After landing checks		
Taxi to parking point		
Shut down and security (chocks, etc)		

GENERAL COMMENTS:

TOW PILOT TRAINING SYLLABUS

BASIC TOW RATING

PILOT NAME _____

INSTRUCTOR NAME _____

GLIDING ORGANISATION _____

EXERCISE	BRIEFING (DATE)	PROFICIENT (DATE)
Understanding of CAR Part 61		
Understanding of CAR Part 91		
Understanding of Appendix A.26 to CAR Part 91		
Understanding of the MOAP (Towing sections)		
Gliding Ground Operations		
Gliding Experience		
Tow Plane Release Features		
Fuel Management		
Oil Management		
Towplane Pre-flight		
Tow Rope and Rings		
Line Up on Glider		
Wing-runner Signals (Up Slack/All Out/Hold)		
Take-off Ground Roll		
Turns on Tow - Normal/Steep		
Airbrakes Open Signal		
Release Immediately Signal		
Noise Abatement During Climb		
Trainee Glider Pilot - Attitude/Stability Control		
Glider Boxing Wake		
Position Glider for Release - Thermal/Wave/Ridge		
Clearance After Glider Release		
Initiating Descent including Engine Management		
Stabilising in Optimum Descent Profile		
Circuit/Landing with Tow Rope Clearance		
Actions After Landing/Ground Roll		

BASIC TOW RATING (Continued)

Wing Down Take-off		
Glider Release or Rope Break at Low Level		
Engine Failure at Low Level		
Tow Upsets		
Non-urgent Situation at Altitude		
Glider Airbrakes Deployed		
Glider Unable to Release		
Glider and Towplane Unable to Release		
Straight & Level/Descent on Tow		
Towing Speeds for Light/Heavy Gliders		
Daily Routine (Before/After Flying Day)		
Weather Minima		
Official Observer Requirements for Task Flights		
Human Factors		
Tow Pilot Responsibilities to Safety of any Tow		

Administration

Instructor certify logbook as required by CAR 61.603(a)		
Complete GNZ Form OPS 14 and forward to relevant ROO		

COMMENTS:

INSTRUCTOR SIGNATURE_____ **DATE**_____

TOW PILOT TRAINING SYLLABUS

ADVANCED TOW RATING

PILOT NAME _____

INSTRUCTOR NAME _____

GLIDING ORGANISATION _____

EXERCISE	BRIEFING (DATE)	PROFICIENT (DATE)
ADVANCED TOWING: GENERAL		
Ops in High Winds		
Ops in Turbulence		
Towing on to Ridges		
Towing in Wave Conditions		
Towing With Poor Horizon Definition		
Towing off Shorter Fields		
Towing off Sloping Ground		
Towing at High country Sites		
CROSS COUNTRY TOWING		
Planning Considerations and Briefing		
Level Tow		
Descent on Tow		
Arrival at Destination		
Non-Normal Situations		
Administration - Log Book Sign Out		
COMPETITION LAUNCHES		
Ground Procedures and Gridding		
Tow Patterns		
Release Points		
Towing Ballasted Gliders		
Non-Normal Situations		
Administration - Log Book Sign Out		

ADVANCED TOW RATING (Continued)

AEROTOW RETRIEVES		
Experience Requirements		
Club Rules		
Performance Considerations		
Permission for Use of Paddocks		
Hazards		
Launch Without Wing Runner		
Non-Normal Situations		
Administration - Log Book Sign Out		
MULTIPLE TOWING		
Performance Requirements		
Pilot Experience Requirements		
Ropes and Rings		
Briefing		
Ground Set-up		
Takeoff Performance		
Manoeuvre on Tow		
Release Procedures		
Non-Normal Situations		
Administration - Log Book Sign Out		

COMMENTS:

INSTRUCTOR SIGNATURE_____ **DATE**_____

FINAL GLIDE and COMPETITION FINISH TRAINING SYLLABUS

PILOT NAME _____

INSTRUCTOR NAME _____

GLIDING ORGANISATION _____

EXERCISE	BRIEFING (DATE)	PROFICIENT (SIGN & DATE)
Understanding of Rules & Procedures for Conduct of Final Glide and Competition Finish		
Glide Performance & Energy Management		
Review of Factors Affecting Glide Performance		
Review of Aircraft Limitations		
Review of High Speed Flight		
Planning a Final Glide		
Radio Calls		
Traffic Separation and Sequencing		
Action if High on Final Glide Profile		
Action if Low on Final Glide Profile		
Decision Points and Escape Manoeuvres		
Use and Dumping of Water Ballast		
Planning Comp. Finish: Turning or Land Through		
Effect of Low Level Wind and Turbulence		
Manoeuvering at Low Level		
Pull-Ups: Straight and Turning		
Visual Illusions at Low Level		
Handling Non-Normals at Low Level		
Review of Stalling, Spinning and Unusual Attitude Recovery		
Administration - Log Book Sign Out		

COMMENTS:

INSTRUCTOR SIGNATURE _____ **DATE _____**

AIRWORTHINESS REQUIREMENTS

1. Introduction

1.1 Pursuant to GNZ's Aviation Recreation Organisation Certificate issued by the Director under CAR Part 149, Part 3 of this Manual prescribes and expands on the airworthiness standards and procedures required by the CAA and GNZ for the operation of gliders and powered gliders in New Zealand.

1.2 This Part 3 applies equally to a CAR Part 103 Class 1 or Class 2 microlight aircraft that has the performance characteristics of a glider when not operating under power. Except as specifically varied, the words "glider" and "powered glider" in this Part 3 must be taken to include such aircraft.

2. Civil Aviation Rules

2.1 The Civil Aviation Rules (CAR), organised into Parts covering specific aviation activities, are published under the authority of the Civil Aviation Act (1990) and apply to all aircraft in or over New Zealand territory. Key Civil Aviation Rules relating to the airworthiness of gliders are:

(a) Part 12 – Accidents, incidents, and statistics
(b) Part 19 – Transition rules
(c) Part 21 – Certification of products and parts
(d) Part 26 – Additional airworthiness requirements
(e) Part 39 – Airworthiness directives
(f) Part 43 – General maintenance rules
(g) Part 47 – Aircraft registration and marking
(h) Part 91 – General operating and flight rules
(i) Part 103 – Microlight Aircraft – Operating Rules
(j) Part 104 – Gliders – Operating Rules
(k) Part 149 – Aviation recreation organisations – certification

2.2 From time to time the various CAR rules are amended and new rules are promulgated as necessary. Affiliates are required to have access to the appropriate up-to-date CARs and to ensure that affiliate members are conversant with them, particularly Parts 43, 91 and 104. GNZ engineers must also have access to the relevant rules. All CAA rules are available free on the CAA web site at www.caa.govt.nz

3. Part 43

Part 43 prescribes the requirements for the maintenance and release to service after maintenance of aircraft, and components to be fitted to aircraft, that are required by Part 91 to have an airworthiness certificate issued under Part 21. [Microlight aircraft are not required to have a Part 21 airworthiness certificate or a Part 91 annual review of airworthiness, as their airworthiness and maintenance requirements are prescribed in Part 103 instead of Part 43.]

[Note that the Director has specifically exempted persons carrying out the 43.113(a) glider control systems duplicate inspection from the associated qualification requirement, provided they hold a valid GNZ Engineer Approval or a current Cross-Country Pilot Certificate (XCP) – reference Exemption 14/EXE/28, downloadable from the GNZ web site http://gliding.co.nz – navigate from the Home page **ABOUT >MOAP**.]

4. Part 91

The objective of Part 91 is to define a regulatory safety boundary for persons wishing to operate aircraft within New Zealand, and New Zealand registered aircraft outside New Zealand. The boundary prescribes general operating and flight rules for the safe operation of aircraft and to minimise any endangerment to persons and property.

Part 91 includes general instrument, equipment and operator maintenance requirements.

5. Part 104

Part 104 prescribes the operating rules for gliders that are additional to, or exceptions from, Parts 91 and 43. The following extracts from the Rules apply to the equipment and maintenance of gliders and powered gliders:

104.101 Aircraft equipment

A person may not operate a glider unless the following equipment and operative instruments are installed –

(1) an airspeed indicator; and

(2) a pressure sensitive altimeter adjustable for barometric pressure; and

(3) a magnetic compass; and

(4) a safety harness for each seat; and

(5) a first aid kit; and

(6) for powered gliders-

(i) a quantity gauge for each main fuel tank; and

(ii) an oil pressure gauge or warning device for each engine other than a two-stroke engine; and

(iii) a tachometer, RPM indicator, or engine governor light for each engine; and

(7) for IMC flight-

(i) a variometer; and

(ii) a turn and slip indicator or artificial horizon; and

(iii) a radio communications transceiver that meets the requirements of CAR Part 91 Appendix A, A.9(c) and is capable of communication with the appropriate ATS unit.

104.103 General maintenance requirements

An operator of a glider must ensure that –

(1) the glider is maintained in an airworthy condition; and

(2) every applicable airworthiness directive is complied with in accordance with the requirements prescribed in Part 39; and

(3) the glider is inspected in accordance with –

(i) this Subpart; and

(ii) the applicable requirements prescribed in Subpart G of Part 91; and

(4) mandatory replacement times, inspection intervals, and related procedures specified in the airworthiness limitations of the manufacturer's maintenance manual or instructions for continued airworthiness issued for the aircraft are complied with; and

(5) between required inspections, a defect is rectified in accordance with Part 43.

104.105 Maintenance inspections

A person must not operate a glider unless, within the preceding 12 months, the glider –

(1) has been inspected in accordance with a maintenance programme required under rule 104.107 and has been certified for release-to-service in accordance with Part 43; or

(2) has passed an inspection for the issue of an airworthiness certificate in accordance with Part 21.

104.107 Maintenance programmes

An operator of a glider must maintain the glider, including the airframe, any engine or propeller, component, survival equipment, and emergency equipment, in accordance with the applicable requirements prescribed in Subpart G of Part 91 and –

(1) the current maintenance schedule recommended by the manufacturer; or

(2) a maintenance programme –

(i) authorised by a gliding organisation in accordance with rule104.109 and the applicable procedures in the gliding organisation's exposition; or

(ii) approved by the Director in accordance with rule 104.109.

104.109 Approval of maintenance programme

(a) An operator of a glider who wishes to maintain the glider in accordance with a maintenance programme under rule 104.107(2) must submit the programme in writing to a gliding organisation for authorisation or, to the Director for approval.

(b) The programme required under rule 104.107(2) must include the following information:

(1) a statement as to whether or not the glider is to be used for a training operation:

(2) a schedule for performing the inspections proposed by the programme expressed in terms of the time in service, calendar time, or any combination of these:

(3) instructions and procedures for the conduct of maintenance for the particular make and model of the glider, including necessary tests and checks. The instructions and procedures must detail the parts and areas of the airframe, engine, propeller and component, including survival and emergency equipment, required to be inspected.

(c) If the operator of a glider amends the maintenance programme that is authorised or approved under paragraph (a), the operator must apply the time-in-service or calendar times accumulated under the previous programme when determining inspection due times under the new programme.

(d) An operator of a glider who maintains the glider in accordance with a maintenance programme required under rule 104.107(2) must amend the maintenance programme in accordance with any instruction issued by the gliding organisation that authorised the programme, or the Director, if the gliding organisation or the Director determines that an amendment is required to ensure the continued adequacy of the programme.

104.113 Technical log

(a) Each operator of a glider shall provide a technical log for the aircraft which has provision for recording –

(1) the name and address of the operator; and

(2) the identity of the maintenance programme to which the glider is maintained; and

(3) a statement of the inspection status of the glider including the identity of the next due inspection and the date of that inspection; and

(4) the date the last annual review of airworthiness was performed [1]; and

(5) the daily hours flown including the total time in service; and

(6) the pilot daily inspection signature; and

(7) the first and second control check signatures after rigging; and

(8) any defects found by the pilot during or following a flight; and

(9) details of rectification of defects occurring between scheduled inspections and the certificate of release to service for that rectification; and

(10) details of any deferred rectification including any inoperative equipment allowed to be inoperative under 91.537.

(b) The operator shall record the information specified in paragraph (a) in the technical log and ensure that the information is current, except that the daily hours flown, and total time in service, may be recorded in daily flying sheets that are of a permanent nature.

104.115 Pilot maintenance

(a) Notwithstanding rule 43.51(b), a person who holds a current glider pilot certificate may perform the maintenance listed in A.1 and A.2 of Appendix A of Part 43 on a glider if the person is the owner or operator of the glider.

(b) Notwithstanding rule 43.101(a)(6), a person who performs maintenance on a glider under paragraph (a) may certify the glider for release-to-service after performing maintenance.

6. Access to Documents

6.1 GNZ engineers must have direct access to, and be familiar with, the contents of the following documents:

(a) New Zealand Civil Aviation Rules (CARs).
(b) GNZ Manual Of Approved Procedures (MOAP), Part 3.

6.2 Access to these documents using the appropriate web site is deemed acceptable. For CARs see website www.caa.govt.nz. For MOAP see website http://gliding.co.nz

6.3 GNZ engineers are strongly advised to avail themselves of the CAA's free notification service that automatically provides email alerts of changes in rules, particularly airworthiness directives (ADs).

7. Glider Maintenance Programme

7.1 Pursuant to Part 104.109, all gliders and powered gliders operated under GNZ's Part 149 certificate except microlight aircraft must be maintained under the GNZ maintenance programme prescribed in form TECH 22 as amplified by GNZ Advisory Circular AC 3-16, published on the GNZ website http://gliding.co.nz/pilots/moap/advisory-circular/

7.2 Pursuant to Parts 104.107 and 103.217, all microlight aircraft operated under GNZ's Part 149 certificate must be maintained in accordance with the manufacturer's maintenance requirements. In cases where manufacturer's maintenance requirements do not exist, GNZ Form TECH 22 and AC 3-16 should be used for guidance.

[1] 91.619(a)(6) requires the date at which the next annual review of airworthiness is due, which has been adopted in GNZ form TECH 19a. Note that an amendment to 91.615 in July 2018, made the review of airworthiness biennial for aircraft not operated for hire or reward.

8. Glider Supplemental Inspections

A glider that is subject to high usage by a number of different pilots of varying skill levels and training regimes, or has completed 200 hours time in service since the previous inspection, must be subjected to a supplemental inspection in accordance with form TECH 22. This includes all two-seat gliders used for flight training, all club single-seat gliders, and all gliders hired out to commercial affiliates. The maximum validity period for a supplemental inspection is six months or 200 hours time in service, whichever comes first.

9. Modifications and Repairs to Gliders and Powered Gliders

9.1 Modifications and repairs to gliders and powered gliders except microlight aircraft must be carried out in accordance with CAA AC 43-9 Modifications, repairs, and the Form CAA 337. GNZ Advisory Circular AC 3-14 Requirements for Acceptable Technical Data should also be consulted in this context. For microlight aircraft Part 103.209 applies.

9.2 Hangar accommodation must be available, appropriate for the work to be carried out, and should have adequate lighting and power supplies. If only simple maintenance or rectification is carried out hangar accommodation may not be necessary. It is not acceptable for a provider of major repair services, or other maintenance services on a continuous basis, to lack access to permanent maintenance facilities.

9.3 Suitable accommodation should be available for the storage of publications, records, spares and equipment.

10. Tow Rings and Tow Ropes

All tow rings used for the launching of gliders and powered gliders by aero tow, auto tow, or winch, must conform to the specifications detailed in Appendix 3-A (page 116). The requirements to be met for tow ropes are specified in Appendix 3-B (page 119), as amplified by Advisory Circular AC 3-02 Aero Tow Ropes.

11. Powered Glider Defining Characteristics

The performance parameters that define whether or not an aircraft can be considered a powered glider and thereby come under the provisions of Part 104 will be determined by CAA at the time of original type acceptance.

12. Colour Coding of Cockpit Controls

12.1 The following colouring of cockpit controls is mandatory:

Canopy Release / Jettison	Red
Tow Release	Yellow
Airbrakes / Spoilers	Blue

12.2 The following colouring of cockpit controls is recommended:

Trim	Green
Flaps	Grey
Undercarriage	Black
Tail Drogue Chute	Blue
Rudder Pedal Adjustment	Black

13. Placards

Placards required and their locations are generally to be found in the glider flight manual.

14. Pilot Maintenance

For convenience the items approved for maintenance by owner/operator pilots under 104.115, as contained in Part 43 Appendix A, are listed in Appendix 3-C (page 120).

AIRWORTHINESS RESPONSIBILITIES

1. Overview

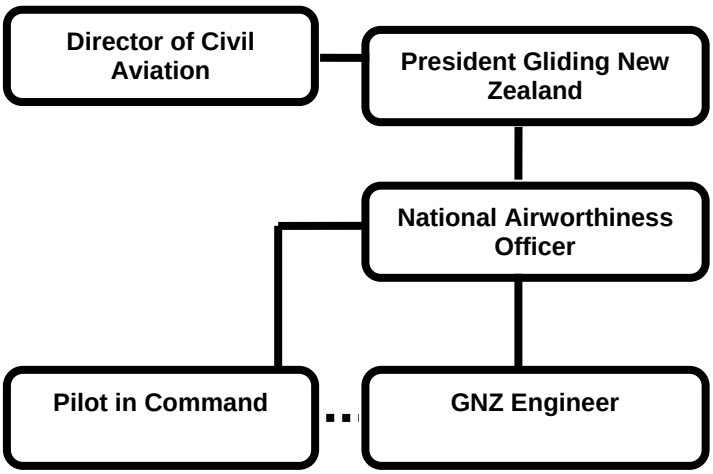
1.1 The President of GNZ is responsible to the Director CAA for the conduct of GNZ engineers and airworthiness procedures in accordance with the GNZ's Exposition. CAA allows GNZ to train engineers, approve glider engineer qualifications and to establish acceptable maintenance schedules and associated procedures to ensure compliance with appropriate CARs.

1.2 GNZ acknowledges that both volunteers and professional engineers carry out the maintenance of gliders. It is GNZ policy to expect the individuals who carry out such maintenance to take responsibility for their work.

1.3 GNZ supervision will be in the form of advice and where necessary, control to the extent necessary to ensure safety and regulatory compliance.

1.4 Where safety is compromised or non-compliance with relevant rules and procedures is evident and is not corrected to the satisfaction of the President of GNZ, the President may take action up to and including removal of a GNZ engineer Approval and/or expelling an affiliate from GNZ in accordance with GNZ's constitution. Any such action may include reporting the engineer and/or the affiliate to the CAA for its action.

1.5 The individual pilot-in-command of a glider is responsible for ensuring the glider is airworthy prior to flight, following the procedure set out in the GNZ Daily Inspection book, TECH 19. If there is any doubt about a fault discovered during inspection prior to flight or if a major defect is apparent, then the pilot-in-command should consult a GNZ engineer. Persons conducting pilot maintenance, and all GNZ engineers, are responsible to the National Airworthiness Officer (NAO) who in turn is responsible to the President of GNZ. The President is responsible to the Director, CAA. This diagram depicts these lines of responsibility.



2. Responsibilities and Duties of the National Airworthiness Officer

2.1 The GNZ Executive appoints a National Airworthiness Officer (NAO). The NAO is responsible to the President of GNZ for the development, implementation, maintenance, and auditing of airworthiness and engineering standards for all GNZ gliding operations in New Zealand, and for advising the GNZ Executive on airworthiness issues.

2.2 The NAO is contracted to perform specific duties, and is authorised to issue, renew and upgrade GNZ engineer approvals and ratings pursuant to Part 43.51(d)(1) and 43.101(b), and certificates of inspection authorisation pursuant to Part 43.151(b) & 43.203(b)(1).

3. Responsibilities of GNZ Engineers

3.1 GNZ engineers carrying out work on gliders are expected to do so with diligence and to employ appropriate standards of workmanship, complying with CARs and the GNZ MOAP.

3.2 GNZ engineers must ensure that all work on gliders is recorded and certified appropriately in the relevant glider logbooks and work records. All work records, including the completed TECH 22 forms, should be retained as part of the maintenance record for the glider to be held by the owner.

3.3 GNZ engineers may be subject to spot checks or audits by the CAA and/or the NAO.

4. Owner/Operator Responsibilities

4.1 The owner/operator of a glider is required to record the hours flown and the launches completed each day in an approved glider logbook. The launches are to be recorded separately as:

(a) 'aero' for aero-tow launches

(b) 'wire' for winch or auto-tow launches

(c) 'self' for self-launch by a powered glider.

4.2 The owner/operator of a glider is responsible for ensuring that the glider is maintained in accordance with the CARs and the GNZ MOAP, in particular that annual inspections are carried out and the release-to-service is current before operation. For a microlight aircraft, in lieu of a release-to-service, a current RAANZ or SAC annual inspection sticker must be clearly visible with the IAH signature and expiry date.

4.3 The only glider maintenance that may be carried out by an owner/operator who is not the holder of a GNZ Engineer Approval is that listed in Appendix 3-C (page 120). For a microlight aircraft, maintenance other than annual inspections may be carried out by the owner/operator.

4.4 The owner/operator of a glider is responsible for retaining all maintenance records pertaining to that glider.

4.5 Advisory Circular AC 3-15 Owner Operator Responsibility for Glider Maintenance should be consulted by persons new to glider ownership.

5. Fleet Maintenance Control

Affiliates owning/operating more than one glider must designate a suitably experienced member to be Maintenance Controller for their fleet. The primary duty of the Maintenance Controller is to assist the affiliate in fulfilling the owner/operator responsibilities in paragraph 4 above. In so doing, the Maintenance Controller must monitor the airworthiness status of all gliders in the fleet and arrange for all necessary maintenance, inspections and airworthiness reviews to be carried out and certified by appropriately qualified GNZ engineers. For full details of these responsibilities, consult Advisory Circular AC 3-15 Owner Operator Responsibility for Glider Maintenance.

ENGINEER APPROVALS

1. Overview

1.1 A person issuing the release-to-service after maintenance on a glider or powered glider or glider or powered glider component that is being operated by an affiliate of GNZ is **required** to hold a current GNZ engineer approval, detailing the approval Class, Material Subdivisions and Ratings that define the privileges of that approval, except where that maintenance is carried out by the owner/operator in accordance with Appendix 3-C. (Reference paragraph 4.3 on page 110.)

1.2 A GNZ approved engineer who is **not** a current and practising aircraft maintenance engineer licensed in accordance with CAR Part 66 must be a member of a GNZ affiliate and pay an affiliation fee to GNZ in order to exercise the privileges of their approval. (Reference Appendix 1-B on page 30.)

1.3 A GNZ approved engineer who is also a current and practising aircraft maintenance engineer licensed in accordance with CAR Part 66 need not be a member of a GNZ affiliate in order to exercise the privileges of their approval.

2. Approval of GNZ Engineers

Appendix 3-D (page 121) details the qualifications required for issue of a GNZ engineer approval. The Appendix includes:

(a) Procedures for the issue and renewal of approvals for each class, subdivision and rating, and

(b) Details of the privileges appropriate to each approval.

3. Application Procedure for GNZ Engineer Approval

Application for any GNZ engineer approvals, upgrades and ratings must be made to the NAO on GNZ form TECH 17 and must be accompanied by the prescribed fee (stated on the form).

4. Renewal of GNZ Engineer Approval

4.1 All GNZ engineer approvals are valid for a period not exceeding two years, with a common expiry date of 30 June. The holder of a GNZ engineer approval that has expired must not exercise the privileges of that approval until it has been renewed, as signified by the receipt of a new approval card from the NAO.

4.2 Application for renewal of GNZ engineer approval shall be made to NAO on GNZ Form TECH 17, by 1st June in the year of expiry, accompanied by the prescribed fee (stated on the form).

4.3 In considering renewal, the NAO will take into account the extent to which the approval has been utilised and any relevant training that the GNZ engineer has undertaken during the previous two years.

5. Currency Requirements

5.1 As a general guide, to maintain currency the holder of a GNZ Class 2 Engineer Approval should have, during the previous two years:

Performed at least 4 supplemental inspections; or

(a) Assisted a Class 3 or 4 GNZ engineer with at least 2 annual inspections;

(b) Performed a combination of the above, totalling 4 inspections; or

(c) Completed a refresher course that is acceptable to the NAO; or

(d) Successfully completed an examination that is acceptable to the NAO.

5.2 As a general guide, to maintain currency the holder of a GNZ Class 3 Engineers Approval should have, during the previous two years:

Performed at least 4 supplemental inspections; or

(a) Performed at least 2 annual inspections; or

(b) Performed a combination of the above, totalling 4 inspections; or

(c) Completed a refresher course that is acceptable to the NAO; or

(d) Successfully completed an examination that is acceptable to the NAO.

5.3 As a general guide, to maintain currency the holder of a GNZ Class 4 Engineers Approval should have, during the previous two years:

Performed at least 4 annual inspections; or

(a) Performed at least 2 major repair or refinish jobs; or

(b) Performed a combination of the above, totalling 4 inspections; or

(c) Completed a refresher course that is acceptable to the NAO; or

(d) Successfully completed an examination that is acceptable to the NAO.

6. Course Tutors

6.1 Course tutors are normally senior GNZ engineers with the experience and teaching skills to carry out the training of GNZ engineers. Tutors are approved by the NAO.

6.2 GNZ engineers wishing to be considered as a course tutor in a particular subject or discipline shall forward a current CV giving their experience in that particular subject, complete with detailed written syllabi and exam criteria for approval by the NAO.

6.3 A course tutor approval forms part of the GNZ Engineer Approval and is renewed at the same time, subject to currency.

6.4 The NAO may appoint a non-GNZ engineer as a course tutor for the purpose of providing specialised engineering training.

7. Suspension of a GNZ Engineer Approval

7.1 When a GNZ engineer is found to be failing to comply with CARs or GNZ engineering procedures, an enquiry will be held to determine what action may be required to rectify the situation.

7.2 The Chairperson for the enquiry will usually be the NAO, assisted by appropriate senior GNZ engineers.

7.3 The GNZ approval of the engineer who is the subject of the enquiry may be suspended by the GNZ President pending the result of the enquiry, if so recommended by the NAO.

7.4 After consideration of the recommendations of the enquiry, the GNZ President may lift the suspension of the approval, or downgrade or revoke the approval.

CERTIFICATE of INSPECTION AUTHORISATION – Glider (IA-G)

1 **Eligibility Requirements**

To be eligible for a certificate of Inspection Authorisation for a glider a person shall:

(a) Hold a current GNZ Class 3 or Class 4 Approval, in any material subdivision (Wood, Metal or Plastic); and

(b) Have held the above for at least three years preceding the application for authorisation; and

(c) Have had recent experience in major maintenance and the subsequent release to service of gliders; and

(d) Complete an Inspection Authorisation Training Course and pass the associated examination, both of which shall be approved by the CAA.

2 **General Requirements**

To be eligible for a certificate of Inspection Authorisation for a glider a person shall:

(a) Reside in New Zealand; and

(b) Have available suitable equipment, facilities and inspection data.

3 **Privileges**

The holder of a certificate of Inspection Authorisation for a glider, also holding the appropriate material subdivision in at least a GNZ Class 3 level, may:

(a) Inspect and certify conformity to acceptable data, of any glider or powered glider, or glider/power glider component, after major repair or major modification.

(b) Perform a Review of Airworthiness for a glider or powered glider in accordance with CAR Part 43.

4 **Recent Experience Requirements**

4.1 To maintain currency the holder of an IA-G certificate must have, during the previous twelve months:

(a) Performed at least 4 Reviews of Airworthiness: or,

(b) Reviewed conformity of 4 major repairs or modifications; or,

(c) Performed a combination of the above; or,

(d) Completed a refresher course that is acceptable to the Director; or

(e) Successfully completed an examination that is acceptable to the Director.

4.2 The holder is also required to:

(a) Successfully complete an approved refresher course every five years; and

(b) Keep a personal logbook recording Review of Airworthiness inspections etc, carried out.

5 **Conditions**

The holder of an Inspection Authorisation Glider Certificate must:

(a) Produce the certificate on demand by the NAO or the CAA; and

(b) Immediately notify the NAO in writing if changing address for service.

(c) Not delegate the associated privileges to any person.

6 **Application for IA-G Certificate**

6.1 GNZ approved engineers who meet the eligibility requirements of paragraphs 1 and 2 above, may make application to the NAO on Form TECH 18 for the issue of an IA-G Certificate.

6.2 This application is to include:

(a) Evidence of compliance with the eligibility requirements stated above; and

(b) The date of attendance of the CAA approved IA Course; and

(c) The date of sitting the approved IA exam; and

(d) A photocopy of the exam result sheet or some other evidence of a passing grade; and

(e) The fee (stated on the form).

7 **IA - G Expiry**

An Inspection Authorisation – Glider may be issued for up to 60 months, but will cease to be valid in the interim if:

(a) The holder no longer resides in New Zealand; or

(b) The holder no longer has the equipment, facilities, data etc; or

(c) Recent experience requirements are not met in respect of the Inspection Authorisation, or the holder's GNZ Engineer Approval; or

(a) It is surrendered, suspended or revoked.

AIRWORTHINESS FORMS

1. The following forms are downloadable from the GNZ web site at http://.gliding.co.nz – navigate from the Home page **ABOUT >Admin & Forms>Tech Forms.**

TECH 11	Identification of Approved Oxygen Cylinder
TECH 17	Application for GNZ Engineer Approval
TECH 18	Application for IA-G Certificate
TECH 19a	Certificate of Release-to-Service (blue page)
TECH 22	Maintenance Schedule
TECH 25	Engineer's Experience Log
TECH 28	Defect Report
TECH 30	Work Record

2. The following booklet is available from the *Gliding International Book Store* email **office@glidinginternational.com**.

TECH 19	Daily Inspection & Tech-Log

3. OSTIV Cockpit Damage Report Form

   In order to help reduce injuries to the occupants during survivable crashes, the Sailplane Development Panel of the Organisation Scientifique et Technique Internationale du Vol a´ Voile (OSTIV) has developed a cockpit damage report (CDR) to gather data about damage to the cockpit area in actual accidents.

   Although submission is not mandatory, GNZ engineers are urged to complete a CDR whenever glider accident circumstances warrant and they are in a position to do so.

   The CDR is downloadable from the GNZ web site at the head of the TECH forms listing.

TOWING RINGS

1. General

Tow rings used for the launching of gliders and powered gliders by aero tow, auto tow, or winch, must conform to the specifications below, or be manufactured by TOST GmbH, as detailed in Para 5 below.

2. Ring Sizes

There are three sizes of ring. The specifications are detailed in para 4. These rings are identified as being:

(a) Ring A Standard small ring.

(b) Ring B Standard large ring.

(c) Ring C Special large ring.

3. Ring Assemblies

3.1 There are three types of ring assembly.

(a) Standard tow ring assembly.

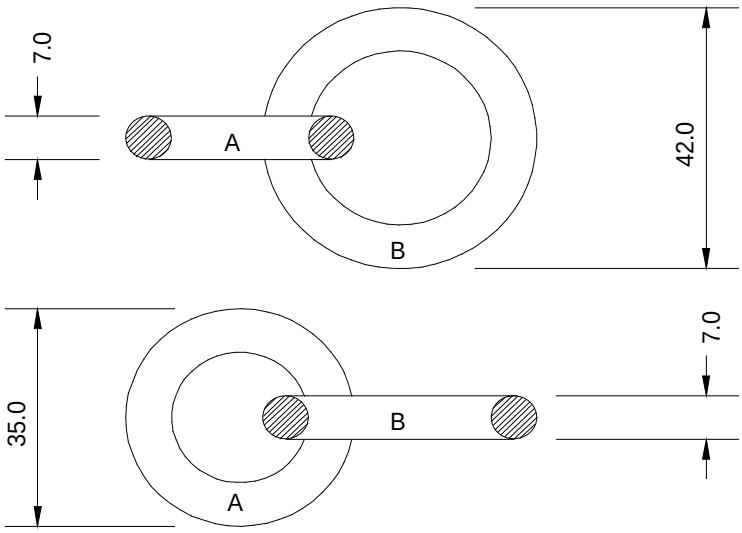
(b) Multiple tow double-ring assembly.

(c) Multiple tow triple-ring assembly.

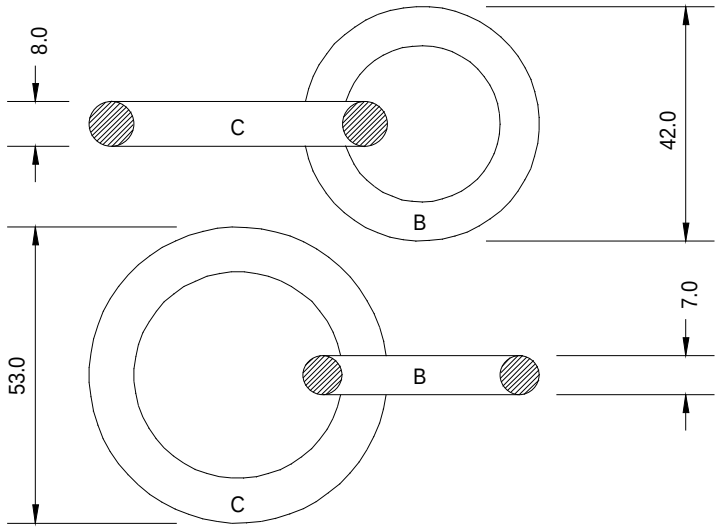
These ring sets are assembled in the following manner.

<u>Note</u>: In all cases the release end is to the left in the following diagrammes, with the rope to the right.

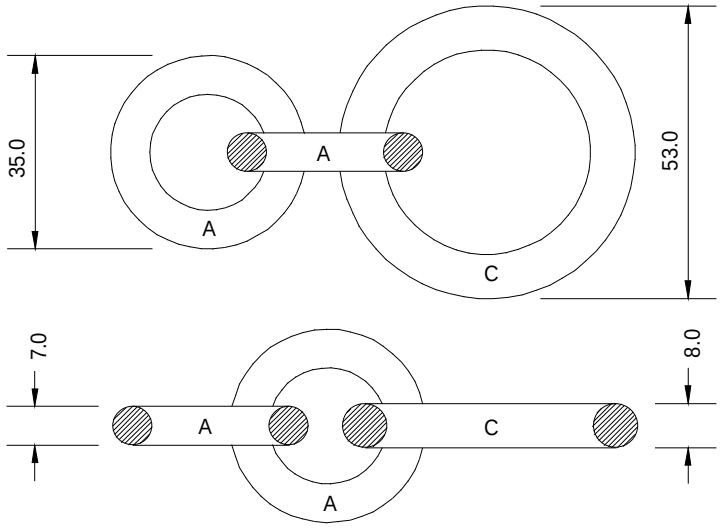
3.2 Standard tow ring assembly: Ring A, Ring B.



3.3 Multiple tow double-ring assembly: Ring C, Ring B.



3.4 Multiple tow triple-ring assembly: Ring A, Ring A, Ring C.



4. GNZ Specifications

4.1 Rings are to be manufactured from round section hard drawn wire to the following Specs:

(a) Wire diameter (Ring A & B) 7mm + 0, - 0.3

(b) Wire Diameter (Ring C only) 8mm + or - 0.3

(c) Material spec (All Rings) ANS/NZS 4671 Grade 500 or equivalent.

4.2 Rings are to be circular in shape and cold formed around a mandrel to achieve the following dimensions after welding:

(a) Standard small ring (ring A) OD = 35mm, + 0, - 0.3
ID = 21mm, + 0, - 0.3

(b) Standard large ring (ring B) OD = 42mm, + 0, - 0.5
ID = 28mm, + 0, - 0.5

(c) Special large ring (ring C) OD = 53mm, + 0, - 0.5
ID = 37mm, + 0, - 0.5

4.3 After forming, and cutting into single rings, the ring should be pressed so that the ends are aligned. The cut ends are to be ground at an angle of approximately 45 degrees, from each side to just less that half thickness, (ie. grind to be in the shape of a "J"). The cut ends are to be welded, using MIG or TIG welding methods and techniques, with appropriate electrodes.

4.4 The small ring is made separately, and the large ring joined to it before the large ring is welded.

Note: During welding care should be taken not to cause heat build-up in the ring, causing it to lose strength.

4.5 Excess weld is to be ground off. The maximum deformity at the weld to be + or - 0.3mm.

4.6 Final treatment.

(a) Rings are to be passivated.

(b) Finished rings may be plated for preservation during storage.

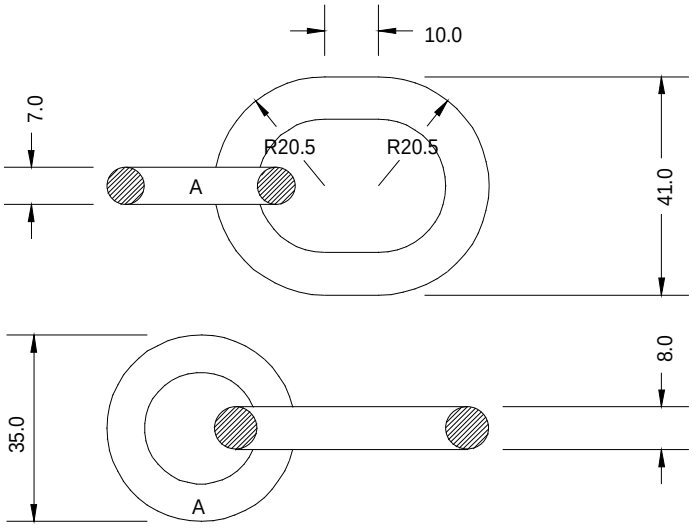
4.7 Identification. Any form of ID, or other information required, may be stamped or embossed ONLY on the standard large ring.

5. Tost Rings

5.1 Tost standard double rings are manufactured to the following specifications:

(a) Small ring of 35mm OD in 7mm material

(b) Large ring of 51mm x 41mm race-track shape in 8mm material.



5.2 The above rings are approved only when manufactured by TOST GmbH, identified by the legend TOST, together with the LN number, stamped on the oval ring.

TOWING ROPES

1. Rope Strength

CAR Part 91.709(c)(2) refers to Appendix A.26, which specifies glider tow lines. However, the Director has granted an exemption to this rule in recognition of the fact that it does not reflect best International practice. Reference Exemption 16/EXE/34, which provides for a rope strength to be chosen to provide appropriate protection to the towing aircraft as well as the glider. In practice this results in the need for a weak-link of breaking strength of between 300 kg and 500 kg (300 to 500 daN) fitted at the towing aircraft end of the rope.

[Exemption 16/EXE/34 is downloadable from the GNZ web site http://gliding.co.nz – navigate from the Home page **ABOUT >MOAP**.]

2. Advisory Circular on Making Tow Rope Assemblies

Advisory Circular, AC 3-02 Aero Tow Ropes provides guidance on making up glider aero tow rope assemblies, in particular:

- Rope specification
- The requirements for a weak-link (reflecting the exemption noted above).
- How to make up ropes from bulk roll.
- Rope splicing.
- Care of ropes
- Towing ring specifications.

.

OWNER/OPERATOR MAINTENANCE

The following maintenance may be carried out by owner/operators without holding a GNZ Engineer Approval, subject to their holding a current XCP certificate:

1. Items requiring a Release to Service Certificate in the TECH 19 DI & Tech Log Booklet

(a) Removal and replacement of landing gear tyres or tailskid shoes.

(b) Removal and replacement of brake pads.

(c) Simple or temporary fabric patch repairs if –

(i) the repair is not applied to any flying control surface; and

(ii) the repair does not require the removal of any control surface or structural part; and

(iii) the repair does not involve restringing or rib stitching.

(d) Restoration of damaged or worn decorative coatings and application of preservative or protective material to components, if the work does not involve –

(i) the removal or disassembly of any primary structure; or

(ii) the disturbance of any operating system; or

(iii) the restoration, preservation, or protection of a control surface; or

(iv) a significant repaint of the glider.

(e) Simple or, temporary repairs to fairings or non-structural cover plates.

(f) Completion of repetitive AD inspections between scheduled maintenance inspections if the AD states that a pilot may complete the inspection and no special tooling or special equipment is required.

(g) Replacement of engine oil and pressure oil filters, and spark plugs.

(h) Installed ELT inspection and test in accordance with Part 43 Appendix F.

2. Items not requiring a Release to Service Certificate

(i) Greasing and lubrication that does not require disassembly other than de-rigging or removal of access panels or fairings.

(j) Removal and replacement of fuses and lights.

(k) Replenishment of hydraulic fluid in hydraulic reservoirs.

(l) Installation or removal of role equipment if –

(i) the installation of the particular equipment has been approved; and

(ii) the approved aircraft flight manual incorporates the necessary information for safe operation with the equipment installed, including weight and balance data for each configuration.

(iii) the applicable information for the installation and removal of the equipment is immediately available; and

(iv) no special tooling, special equipment, or subsequent inspection is required.

(m) Removal and replacement of glider batteries.

(n) Performance of routine maintenance that is intended by the glider manufacturer to be performed by a pilot provided no special tooling or equipment is required.

(o) Removal and replacement of oxygen cylinders, or replenishment of oxygen cylinders in situ. (Note that decanting of bulk compressed oxygen into glider cylinders is potentially hazardous and requires appropriate training.)

GNZ ENGINEER APPROVALS

1. General

1.1 This section prescribes the knowledge and experience required for the issue of a GNZ Engineer Approval, and the procedures to be followed for its issue and renewal. The associated privileges are also specified.

1.2 GNZ Engineer Approvals are issued with one of three levels of approval (Class 2, 3 or 4). Classes 3 and 4 are granted in material subdivisions (para 3) which relate to the type of material used for the major components in a glider (wood, metal, fibreglass).

1.3 Ratings may be attached to approvals, relating to specific technical areas.

1.4 The fee for initial application, renewal, and upgrade is stated on the TECH 17 application form.

1.5 A GNZ Engineer Approval or Rating may be issued for a period of up to 24 months.

2. Knowledge and Experience Required for Approval

2.1 Class 2 Approval

An applicant who is not a licensed aircraft maintenance engineer (in accordance with CAA part 66, Subpart B) shall:

(a) Attend a course of instruction, and pass an examination (both approved by GNZ), on the relevant New Zealand Civil Aviation Rules.

(b) Have demonstrated:

(i) an understanding of the theory of flight relative to gliders to a standard equal to that required of an XCP holder; and

(ii) the ability to recognise and classify failures in primary and secondary structures.

(c) Have demonstrated knowledge of:

(i) the principles of glider construction and materials used, and the ability to interpret drawings, material specifications and Airworthiness Directives; and

(ii) instrument systems and installations; and

(iii) minor repair techniques; and

(iv) control systems and their methods of adjustment.

(d) Present an experience log, duly signed by a GNZ Class 3 or 4 engineer, showing at least 100 hours experience under direction in glider maintenance acquired over the previous 24 months;

(e) Notwithstanding the requirements of 2.1(d), the applicant may have less than 100 hours experience provided they either:

(i) work full time on glider maintenance in an approved professional glider maintenance workshop; or

(ii) have a background in light mechanical engineering; or,

(iii) provide suitable evidence of equivalent engineering experience.

2.2 **Class 3 Approval**

An applicant who is not a licensed aircraft maintenance engineer (in accordance with CAA part 66, Subpart B) and who wishes to upgrade to GNZ Class 3 approval, must:

(a) Have held a Class 2 approval for a minimum period of three years; and

(b) Produce an experience log complete with dates, aircraft registration, work done and hours logged, signed by a Class 3 or Class 4 GNZ engineer; and

(c) Complete a revisionary course of instruction, and pass an examination, (both approved by GNZ), on the relevant New Zealand Civil Aviation Rules; and

(d) Already hold, in addition to their GNZ Class 2 approval, the following GNZ engineering ratings:

(i) "C" (Compass), as defined in para 4(a), including all documentation; and

(ii) "S" (Weight and Balance), as defined in para 4(b); and

(e) Have demonstrated:

(i) knowledge of modification approval procedures using Form 337; and

(ii) knowledge and ability to carry out minor modifications and repairs in accordance with Acceptable Technical Data and while working within the material subdivisions of the rating; and

(iii) knowledge of oxygen systems and installations as used in gliders.

2.3 **Class 4 Approval**

An applicant who wishes to obtain a GNZ Class 4 approval must:

(a) Have held a GNZ Class 3 approval for a minimum period of three years; and

(b) Be able to show documented experience in all aspects of maintenance and repair work appropriate to the material subdivisions being applied for, by means of an experience log recording dates, aircraft registrations and details of the work done in terms of the hours worked against specified Acceptable Technical Data; and

(c) Have demonstrated a practical ability to a high standard; and

(d) Complete a revisionary course of instruction and pass an examination (both approved by GNZ) on the relevant New Zealand Civil Aviation Rules; and

(e) Have demonstrated acceptable knowledge of:

(i) airframe structures, inspection methods, technical drawings, jigging methods and symmetry checks; and

(ii) properties and methods of testing materials used in glider construction; and

(iii) non-destructive testing techniques; and

(iv) the need for, and how to prepare or obtain, an authorised Repair Scheme

(f) Establish an ongoing working relationship with the holder of either a Certificate of Inspection Authorisation (IA) issued under CAR Part 66 or a GNZ Certificate of Inspection Authorisation (IA-G) for certifying major repairs and modifications for conformity to Acceptable Technical Data, and for the performance of Reviews of Airworthiness.

3. Material Subdivisions

Class 3 and 4 approvals may be granted in one or more of the following subdivisions:

(a) **Subdivision W** - For gliders and powered gliders that have major components principally of wooden and tubular steel structure, fabric covered (Part 66 Group 3).

(b) **Subdivision M** - For gliders and powered gliders that have major components principally of metal stressed skin construction (Part 66 Groups 1 & 2).

(c) **Subdivision P** - For gliders and powered gliders that have major components principally of fibre reinforced plastic (FRP) construction (Part 66 Group 4).

Note: These subdivisions align with the Group Ratings in CAR Part 66 Appendix B.

4. Ratings

Applicants for ratings must possess the following knowledge and ability as appropriate:

(a) **C Rating**: (Compass) Applicants must have correctly carried out at least three glider or powered glider compass swings, including completion of all required documentation, under the supervision of a Class 3 or Class 4 GNZ engineer.

(b) **S Rating**: (Weight & Balance) Applicants must have correctly carried out at least two glider or powered glider weighings, including computation of centre of gravity position and minimum and maximum pilot weights, complete with all required documentation, under the supervision of a Class 3 or Class 4 GNZ engineer.

Note: C & S ratings are an extension to the Class 2 approval only. It is a requirement of an upgrade to Class 3 or 4 that these Ratings be already held.

(c) **R Rating**: (Radio)

(i) applicants must possess sufficient knowledge of radio transmitting devices used in gliders and powered gliders to inspect, carry out a basic function check, and perform minor maintenance to wiring, microphones, PTT, etc.

(ii) when issued in conjunction with a Class 3 or 4 approval, the engineer may install or replace Radios, Transponders, Altitude Encoders and fixed ELTs in accordance with Approved Technical Data.

(d) **E Rating**: (Engine) Applicants must possess the skills and knowledge to carry out maintenance, within the limits of their approval, on powered glider two and four stroke engines, engine controls, engine instrument systems, fuel systems, propellers and propeller controls. The E rating has three subdivisions: E2, E3 and E4, which are detailed at paragraph 5.4(d).

(e) **A Rating**: (Avionics and Instruments) Applicants must possess the skills and knowledge, and have access to the required manuals and test equipment, to inspect and maintain glider avionics and instruments and to carry out radio, altimeter and transponder tests required in accordance with CAR Part 43 Appendices B, D and E.

(f) **O Rating**: (Oxygen Regulator) Applicants must possess the skills and knowledge, and have access to the required manuals and test equipment to inspect, test, maintain and repair oxygen regulators and metering devices used in gliders.

Note: Original equipment manufacturers (eg Mountain High) do not require an "O" rating.

5. Privileges of GNZ Engineer Approvals

5.1 Class 2 Approval Privileges

GNZ engineers holding a Class 2 approval may carry out and certify the following work on all gliders and powered gliders:

(a) Removal and reinstallation of primary and secondary control surfaces, and first or second inspection of a duplicate safety inspection of the flying control system in accordance with CAR Part 43.113; and

(b) Minor field repairs and repairs generally that maintain serviceability and can be performed by elementary operations in accordance with accepted practices; and

(c) Adjustment of controls; and

(d) Installation of instruments when original manufacturers instrument panels and mountings, pitot and static ports, are used; and

(e) Inspection of safety harnesses; and

(f) Supplemental inspections and inspections after abnormal flight or ground loads in accordance with GNZ TECH 22, and issue a release to service.

5.2 Class 3 Approval Privileges

GNZ engineers holding Class 3 approval may carry out and certify the following work on gliders and powered gliders in addition to that applicable to Class 2 approval:

(a) Perform the annual inspection in accordance with GNZ TECH 22, provided the appropriate material subdivisions are held; and

(b) Make minor modifications and minor repairs in accordance with Acceptable Technical Data provided the appropriate material subdivisions are held; and

(c) Perform the inspection for issue or renewal of Airworthiness Certificate, provided the appropriate material subdivisions are held; and

(d) Weighing and preparation of equipment lists, calculation of centre of gravity and minimum and maximum pilot weights and ballast requirements; and

(e) Installation and minor maintenance of instruments, and oxygen systems to Acceptable Technical Data; and

(f) Swinging and adjustment of direct reading compasses and preparation of deviation cards.

5.3 Class 4 Approval Privileges

GNZ engineers holding a Class 4 approval may carry out and certify the following work on gliders and powered gliders in addition to that applicable to Class 3 approval:

(a) Repair of gliders and powered gliders in accordance with Acceptable Technical Data, providing the appropriate material subdivisions are held.

(b) Major modifications and major repairs in accordance with Acceptable Technical Data, providing the appropriate material subdivisions are held.

(c) Installation, in accordance with Acceptable Technical Data, of instruments including installation of pitot or static ports and manufacture of instrument panels or mountings.

(d) Installation of oxygen equipment in accordance with Acceptable Technical Data.

5.4 **Rating Privileges**

GNZ engineers holding the following ratings may carry out and certify work appropriate to the rating on all gliders and powered gliders, as specified below:

(a) **C rating (Compass – extension to Class 2 approval)**: Swinging and adjustment of direct reading compasses and preparation of deviation cards.

(b) **S rating (Weight and Balance extension to Class 2 approval)**: Weighing, preparation of equipment lists, calculation of centre of gravity and minimum and maximum pilot weights and ballast requirements.

(c) **R rating (Radio)**

(i) For Class 2 approval: Simple function test and minor wiring maintenance of VHF communication radio and ELT installations.

(ii) For Class 3 & 4 approval: Installation of VFR communication radios, transponders and altitude encoders in accordance with Acceptable Technical Data. Simple function test and minor wiring maintenance of VHF radios, transponders, altitude encoders and ELT installations.

(d) **E rating (Engine)**

(i) **E2 -** Minor maintenance of engines, engine controls, engine instruments, fuel systems, spark plugs, air cleaners, propellers and propeller controls, which do not require disassembly of ancillary engine mounted components.

(ii) **E3** – As for E2 above, plus the removal, repair and maintenance in accordance with Acceptable Technical Data, and reinstallation of ancillary engine mounted components.

(iii) **E4** - Major repair and maintenance in accordance with Acceptable Technical Data of engines and/or propellers as determined by GNZ.

6. Special Ratings

6.1 The following special ratings can only be issued to persons who have completed a full training in the appropriate trade:

(a) **A Rating**: (Avionics and Instruments) The inspection and maintenance of glider avionics and instruments and to carry out radio, altimeter and transponder tests required in accordance with CAR Part 43 Appendices B, D and E.

(b) **O rating (Oxygen Regulators)** The maintenance of glider oxygen regulators, including oxygen regulator tests.

6.2 Special ratings may be issued to persons not holding a GNZ Engineer Approval, or an AME licence with aeroplane rating under CAR Part 66. In such cases, the GNZ approval will be issued without a material subdivision, thus restricting the associated privileges to the relevant equipment.

7. Issue of GNZ Engineer Approval

7.1 Application and Assessment of Applicants

7.1.1 An applicant will be issued with a GNZ Approval or Rating if the National Airworthiness Officer (NAO) is satisfied that:

(a) The applicant is a fit and proper person having regard to sections 9 and 10 of the Civil Aviation Act; and

(b) The applicant has sufficient ability in reading, speaking and understanding the English language to enable him or her to carry out the responsibilities of the holder of that approval, rating or certificate; and

(c) The applicant meets the eligibility requirements for the approval, rating or certificate; and

(d) The granting of the approval, rating or certificate is not contrary to the interests of aviation safety.

7.1.2 The holder of a current aircraft maintenance engineer licence issued by the Civil Aviation Authority of New Zealand under CAR Part 66, is entitled to an approval or rating issued by GNZ if the holder meets the requirements of that approval or rating (see paragraph 9 following).

7.2 Approval of applicants

7.2.1 Initial application for approval, or upgrade, as a GNZ engineer shall be made on form TECH 17, and forwarded to the NAO.

7.2.2 The NAO shall examine the suitability of the applicant for the approval applied for, taking into account experience, qualifications, ability, knowledge, personal qualities and the suitability of the premises and facilities to be used. For Class 4 approval, the applicant must nominate the person holding an IA or IA-G Certificate with whom an ongoing working relationship will be established.

7.2.3 The NAO may require the applicant to attend an appropriate course on glider engineering, or to complete some other relevant action, before issuing an approval.

7.2.4 On the successful completion of the appropriate course (if applicable) and associated examination, and dependent on all other requirements being met, the NAO will issue the appropriate approval.

8. Validity Period and Application for Renewal of Approval

8.1 The maximum validity period for GNZ Engineer Approvals shall be two years. However, this period may be reduced for the initial approval so as to provide a common expiry date of 30 June.

8.2 Application for renewal of a GNZ Engineer Approval shall be made to the NAO, giving the required details (see GNZ form TECH 17). The NAO will consider the applicant's currency and, if satisfied, will renew the approval. (See pages 111-112 for currency requirements.)

8.3 Note that TECH 17 requires the attachment of form TECH 25, Experience Log, detailing a chronological list of work carried out in the previous 2 years. Engineers who are working essentially full time on glider maintenance, and those who are also current and practising LAMEs, need only to state this fact on the TECH 25 and note briefly the general type of glider maintenance work carried out having regard to the currency requirements.

8.4 Where an approval has lapsed for more than two years, it will be cancelled and the procedure for an initial application must be followed. (eg an approval issued 30 June 2007, but not renewed on or before June 2011, will be cancelled on 30 June 2011.)

9. LAME Requirements to Qualify for GNZ Engineer Approvals

9.1 The following applies to a person licensed under CAR Part 66, Aircraft Maintenance Personnel Licensing who is seeking the issue of a GNZ Approval to carry out maintenance on gliders and powered gliders:

(a) A current licensed engineer holding a rating for aeroplanes –

(i) Group 1 or Group 2 will, on application, be approved to GNZ Class 3, subdivision M (Metal).

(ii) Group 3 will, on application, be approved to GNZ Class 3, subdivision W (Wood).

(iii) Group 4 will, on application, be approved to GNZ Class 3, subdivision P (Plastic).

(b) A licensed engineer holding a rating for Powerplant Group 1or Group 2 will, on application, be approved to GNZ Class 3, rating E2 (Engine).

Note: As most powered glider engines are two-stroke cycle, applicants for higher engine ratings are required to show satisfactory experience in the maintenance of two-stroke engines.

9.2 In the following cases, if no aeroplane rating is held, the GNZ Class 3 approval will be issued without a material subdivision, thus restricting the associated privileges to the relevant equipment.

(c) A licensed engineer holding a rating for Radio Group 1 will be approved to GNZ Class 3, Rating R (Radio) and Rating A (Avionics and Instruments).

(d) A licensed engineer holding a rating for Instruments Group 1 will be approved to GNZ Class 3, Rating A (Avionics and Instruments) and O (Oxygen).

9.3 A licensed engineer seeking a GNZ Class 4 approval, (major repairs) is required to show satisfactory experience and qualifications on similar airframes within the group ratings.

9.4 All applications are to be made on GNZ Form TECH 17 and forwarded to the NAO.