BGA TRAINING ORGANISATION

SAILPLANE TOWING COURSE PROGRAMME

V1.5 JULY 2025

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CANDIDATE TUG PILOT DETAILS

Name:

Licence number:

PART 1 - INTRODUCTION AND GENERAL INFORMATION

There is no requirement to hold sailplane towing privileges to tow sailplanes.

The BGA recommends that clubs use this training programme when training tug pilots.

Sites

Clubs are responsible for the suitability of the training site.

Aircraft

Clubs are responsible for ensuring the aircraft and other equipment used for towing training is suitable and airworthy.

Guidance

The BGA online Managing Flying Risk publication ‘Towing/Operating tug aircraft’ is a recommended source of information.

Training completion

On completion of training, the club tug master or FI(A) or CRI(A) should sign the pilot’s logbook.

PART 2 – SAFETY

The BGA office is responsible for publication of the BGA Safety Management System (SMS) manual, which is available on the BGA members website (search Safety Management System).

Clubs are responsible for the safety of all training carried out at and from their site and for compliance with club and BGA incident and accident reporting requirements.

Safe towing is important for both the tug pilot and of course the sailplane pilot. It would be unusual for a tug pilot to not have sailplane flying experience to at least SPL standard.

The pilot providing coaching must be suitably experienced including significant experience of sailplane towing and be familiar with the towing aircraft type and operation.

PART 3A – THEORETICAL KNOWLEDGE TRAINING

The following theoretical knowledge syllabus is recommended:
Equipment used for sailplane towing:
The aircraft (including the glider), weights, other
Tow rope and rope retrieval systems
Sailplane towing techniques including:
(i) Signals and communication procedures
(ii) take-off (normal and crosswind);
(iii) in-flight launch procedures;
(iv) descending on tow;
(v) sailplane release procedure;
(vi) tow rope release procedure;
(vii) landing with tow rope connected (if applicable);
(viii) emergency procedures during tow;
(ix) safety procedures;
(x) flight performance when towing sailplanes;
(xi) look-out and collision avoidance;
(xii) sailplane performance, including: • suitable speeds • handling on tow

PART 3B – COACHING

The following flight exercises are recommended:

Exercise (1) - Take – off and climb procedures with a glider in tow (normal and crosswind take-offs)
TEM – Risk assessment incl performance and stopping points, Lookout , Winch launch tow hooks, Pilot experience, Winch cables

• Risk assessment / airfield operations
• Normal take-off
  ○ Signals / radio
  ○ RPM
  ○ Hand on throttle / glider release?
  ○ Pitch and climb control as appropriate
  ○ Speed control / trim
• Aborted take-off (glider releases)
• Cross wind Take – off
• Selection of route
• Out of position glider and acceptable limits. Discuss unacceptable limits, eg glider too high on tow, symptoms and immediate release action

Completion standard: Suitable lookout procedures Suitable speed control – once out of the wind gradient +-10 Knots Competent engine monitoring and handling Safe piloting skills and airmanship such that the successful outcome of a procedure or a manoeuvre should never seriously be in doubt

Exercise (2) – 360° circles on tow with a bank of 30° and steeper
TEM – Lookout (high / low wing tugs), Glider unable to follow now out of airfield range
• Appropriate rate of roll and angle of bank for the pilot / situation • Appropriate speed for glider / tug / climb performance
Completion standard: Suitable lookout procedures Competent situational awareness with respect to wind direction, lift for the glider and the location of the airfield

Exercise (3) – Descending on tow
TEM – Lookout, bows in rope, snatching and therefore weak link breaking
• Gently! • Communication with glider pilot
Completion standard: Appropriately smooth flying Competent communication with the glider while maintaining situational awareness

Exercise (4) – Release procedure of the sailplane
TEM – Hitting the glider, Lookout

• Immediate actions in the tug
  ○ Hot engine, so avoid shock cooling
  ○ Flaps
  ○ Beginning descent
  ○ Lookout
  ○ Circuits and further engine management

Completion standard: Competent airmanship when separating with the glider and lookout procedures Appropriate engine management in accordance with AFM and BGA Aerotowing handbook Joining the circuit appropriately to achieve separation from other traffic

Exercise (5) – Landing with the tow rope connected
TEM – Hitting personnel and objects on the ground with the rope, snaring objects with the rope
• Heights over obstacles when landing • Winding in the rope with the winch if fitted   ○ Is the rope really in?

Completion standard: Appropriate risk assessments when overflying boundaries with respect to rope clearance

Exercise (6) – Tow rope release procedures in flight
TEM – Hitting objects / personnel on the ground
• Circumstances that warrant releasing the rope in flight • When the runway is short • Direction of rope drop.
Completion standard: Prioritisation of workload when attempting to drop the rope Appropriate risk assessments when choosing where and when to drop the rope

Exercise (7) – Emergency Procedures
TEM – Causing a real emergency
• Engine failures • Glider signals can't release • Gliders with airbrakes open or drogue chute deployed
Completion standard: Appropriate prioritisation of tasks when dealing with any simulated emergencies Appropriate level of flying skill and airmanship while dealing with simulated emergencies – airspeed should be managed at +-10 kts

Exercise (8) – Signals and communication during tow
TEM – Ambiguous communication and confusion
• Control surface and positioning signals from and to the towing aircraft • Use of the radio as a preference
Completion standard: Suitable use of signalling to achieve a safe tow in all circumstances, including emergencies