AIM: To safely descend on aerotow *(why? fly under developing cloud, airspace step down, buy time if unable to release)*

TEM: TUG UPSET / LARGE BOW – Flight path such that glider pilot can release without hesitation, target rate of descent easily controlled by airbrakes
COLLISION whilst descending – Flight path to remain clear of airfield launch and circuit areas
CO-ORDINATION & MAMAGEMENT – Exercise briefed to all crew, radio comms confirmed, escape plan considered

Purpose of exercise

To enable the combination to safely fly level or descend to avoid cloud or an airspace step down, or in the event of a release failure to avoid having to continue climbing.

These situations are rare but do occur over a gliding career.

Pre-requisites

The Instructor and tug pilot should be competent to perform the exercise themselves.

The student pilot should be competent to fly a solo aerotow in thermic conditions, eg able to maintain position when moderate deviations occur.

Initial attempts should be completed in relatively calm air.

General principles

1) Manoeuvre is performed in distinct sections to manage changes in flight path and trim;
2) All transitions are progressive;
3) DRAG from airbrakes is applied first and removed last to keep tension on tow tope, Full airbrake easier for glider pilot, at least ½ required but this may need to be increased if tug pilot increases descent rate.
4) Max rate of descent required 500fpm this helps to keep tension on tow rope, tug will be in cruise descent with power minimal power change which also helps engine warming, make power changes in small increments.

INSTRUCTOR TEM

1) Radio comms checked between tug and glider prior to launch and / or commencing exercise. Use radio as necessary.
2) Instructor hand on release when monitoring student pilot to release if needed.
3) Exercise initiated with consideration to Flight path, height, distance so that rope can be release without hesitation if needed, eg at least 1,500' with distance to airfield reducing and avoiding circuit and launch traffic.
4) Avoid busy areas and consider blind spot underneath tug nose while climbing prior to exercise.
5) Escape plan to avoid end of rope if necessary to release:
   - release under tension or as rope comes tight if bow has developed;
   - Consider: DO NOT RELEASE broken cable if rope breaks?
   - climb after release – remember to close airbrakes
   - if glider gets low but otherwise under control, continue and do not release while in or below slipstream
   -Inform tug pilot by radio when clear if release during manoeuvre.
6) Normal instructing principles apply: Brief → Demo → Prompt → Practice
7) INSTRUCTOR TAKE OVER as soon as any deviation from correct flight path.

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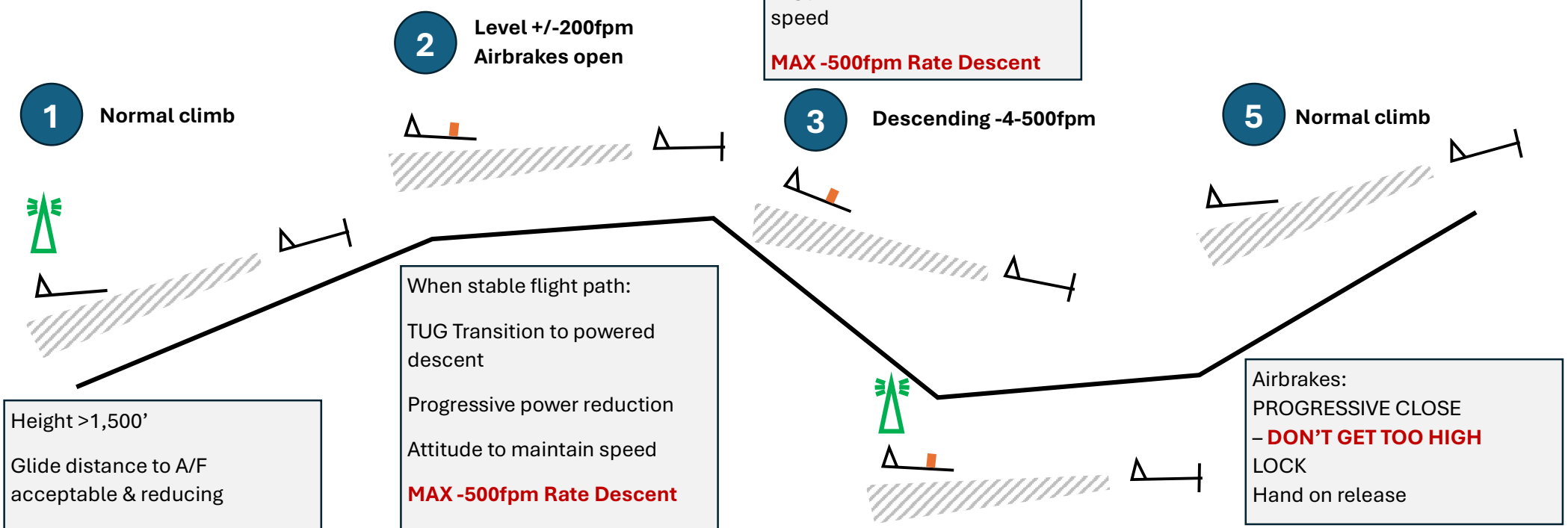
Exercise:

Confirm satis radio comms between tug and glider before commencing exercise.



Height >1,500'

Glide distance to A/F acceptable & reducing

Flight path clear launch & circuit area

Initiate AS BRIEFED or RADIO

Instructor HAND ON RELEASE

Airbrakes:
UNLOCK
CRACK OPEN – **DON'T SINK**
PROGRESSIVE TO FULL A/B

When stable flight path:

TUG Transition to powered descent

Progressive power reduction

Attitude to maintain speed

MAX -500fpm Rate Descent

Glider remain above slipstream

Maintain FULL AIRBRAKE

Tug power + attitude to maintain speed

MAX -500fpm Rate Descent

Terminate AS BRIEFED or RADIO "GGC CLIMB"

TUG Progressive transition climb configuration

Maintain FULL AIRBRAKE until climb configuration stabilised (or airbrake open signal)

Airbrakes:
PROGRESSIVE CLOSE
– **DON'T GET TOO HIGH**
LOCK
Hand on release