

CROSS-COUNTRY AEROTOW

KNOW IN ORDER TO UNDERSTAND,
UNDERSTAND IN ORDER TO ACT,
ACT IN ORDER TO SUCCEED.

Leo Brigliadori Italian Champion in “Competing in Gliders”

CROSS COUNTRY AEROTOW IS UNIQUE AND UNCOMMON FOR US.

I have experienced about 20-25 cross country aerotows as glider pilot, including Monroe-Cordele in G103, Monroe-Callaway Gardens in L13, Contest retrieves in ASW-20, ASW27, DG800 (yes, motors don't always work). Badge flight in Libelle 201, Badge-Wave in LS4 at Minden and 2-33 in South GA. And numerous retrieves at the front end of the rope in the Pawnee and C-182.

THE ATMOSPHERE IS ALIVE

Atmospheric perturbations are the rule, except early AM and late—about 1 hr before sunset. So expect to have to work! Towing in a wind shear level is extra work. So know the atmospheric vertical profile.

THE TOWPILOT MAY, OR MAY NOT, BE EXPERIENCED IN THIS PHASE.

Most experienced, non-glider-rated, airplane pilots try to hold altitude in cruise. They reduce speed in down current and increase speed in up current. This is guaranteed to give you slack rope. What is needed is to hold ATTITUDE instead and let the altitude fluctuate. It won't vary much.

The cruise speed of the tow combination may be faster than you are used to on tow. Control inputs must be more subtle. It will be harder to modulate the airbrakes.

DESCENT ON TOW IS NOT RECOMMENDED, but on rare occasions may be needed. Full airbrakes is helpful.

SLACK LINE OCCURS MORE OFTEN THAN YOU LIKE.

So, you must scrupulously maintain position—keep the glider on a short leash. May need to keep airbrakes unlocked, but closed so they can be used smoothly. Subtle rudder input for yaw is easier. But use what you need! DESCENT ON AEROTOW REQUIRES SPECIAL ATTENTION, AND CAN BE DIFFICULT.

NAVIGATION/ OBSERVATION

Don't leave it up to the towpilot. (S)He can get lost too.

LEVEL FLIGHT IS NOT THE ONLY OPTION ON SHORT AEROTOW.

Continuing the climb makes it MUCH easier. Can release when you are a 15:1 glide to a 1000 ft pattern. If not confident, get closer/higher. ORDINARILY, DESCENT ON TOW IS NOT DONE.

COLLABORATE FLIGHT PLAN WITH TOWPILOT BEFORE LEAVING THE GROUND.

There must be NO confusion about THE PLAN.

BRIEFING GUIDE

- PLAN ROUTE
 - Avoid unlandable areas
 - Avoid “Regulatory” areas (Class D and above, Live Fire Areas, etc.)
 - Know special areas, Radio Frequencies , traffic pattern, etc
 - Weather briefing/ awareness incl remaining daylight
- PLAN FLIGHT PROFILE
 - Climb; level flight; DESCENT ON TOW?-(NOT USUALLY!); release points.
 - I prefer High Tow position. I’ve tried both.
 - Low tow tries to pitch glider nose up after a while.
 - Who lands first.
 - Usually Towplane descends after release and reaches airport first.
 - Glider may be stuck on runway after landing. Towpilot can help.
- Discuss above with towpilot
 - Tow pilot may have valuable local information
 - Towpilot may be clueless
 - Especially about Altitude vs Attitude holding
 - Fuel?????
 - VFR—need 30 min fuel in tank after landing

SPECIAL ACTION ITEMS

- Secure loose items in cockpit—can be turbulent.
- Have Sectional Chart/ know Nav gear
- Maintain position scrupulously
- Use yaw preferentially, then spoiler, to tighten slack.
 - Subtle, Gentle, Frequent
 - Small corrections early, so you don’t need large corrections later.
- Can use thermalling flaps and forward trim to create a bit more drag.
- Maintain communication with towpilot as needed. If you want something different, say so! Use 123.3 or 123.5 enroute
- Release if ,and only if, you are confident you have the airport made
- If control cannot be established quickly, release and land offfield.
 - A good off field landing is far better than crashing two aircraft.

UNASSISTED TAKEOFF

MAY BE NECESSARY IN AERO RETRIEVE. IF NOT ABSOLUTELY CONFIDENT, THEN CALL FOR TRAILER!!!!

BRIEFING

- Glider and towpilot confer before anything else is done.
 - Runway surface must be smooth. Don't catch a wingtip.
 - Length, obstructions considered
 - Abort point decided.
- Towplane sits on runway, engine off
- Glider pilot gets in glider, in position
 - Does all checklist items
 - windward wing down
- Towpilot hooks up rope.
- Towpilot starts engine, taxies forward till rope "all out"
 - may need glider radio call to help
- Glider pilot
 - FULL aileron opposite down wing (i.e. left wing down, right aileron)
 - FULL Rudder same (i.e. right aileron, right rudder)
 - Radio towpilot "Ready to Launch"
- Towpilot confirms
- Glider ready for instant release if needed
- Takeoff—climb with towplane, don't stay low.
 - Towplane may accelerate in ground effect, then climb abruptly
 - especially on grass surface
 - Reduce control inputs as soon as controls respond