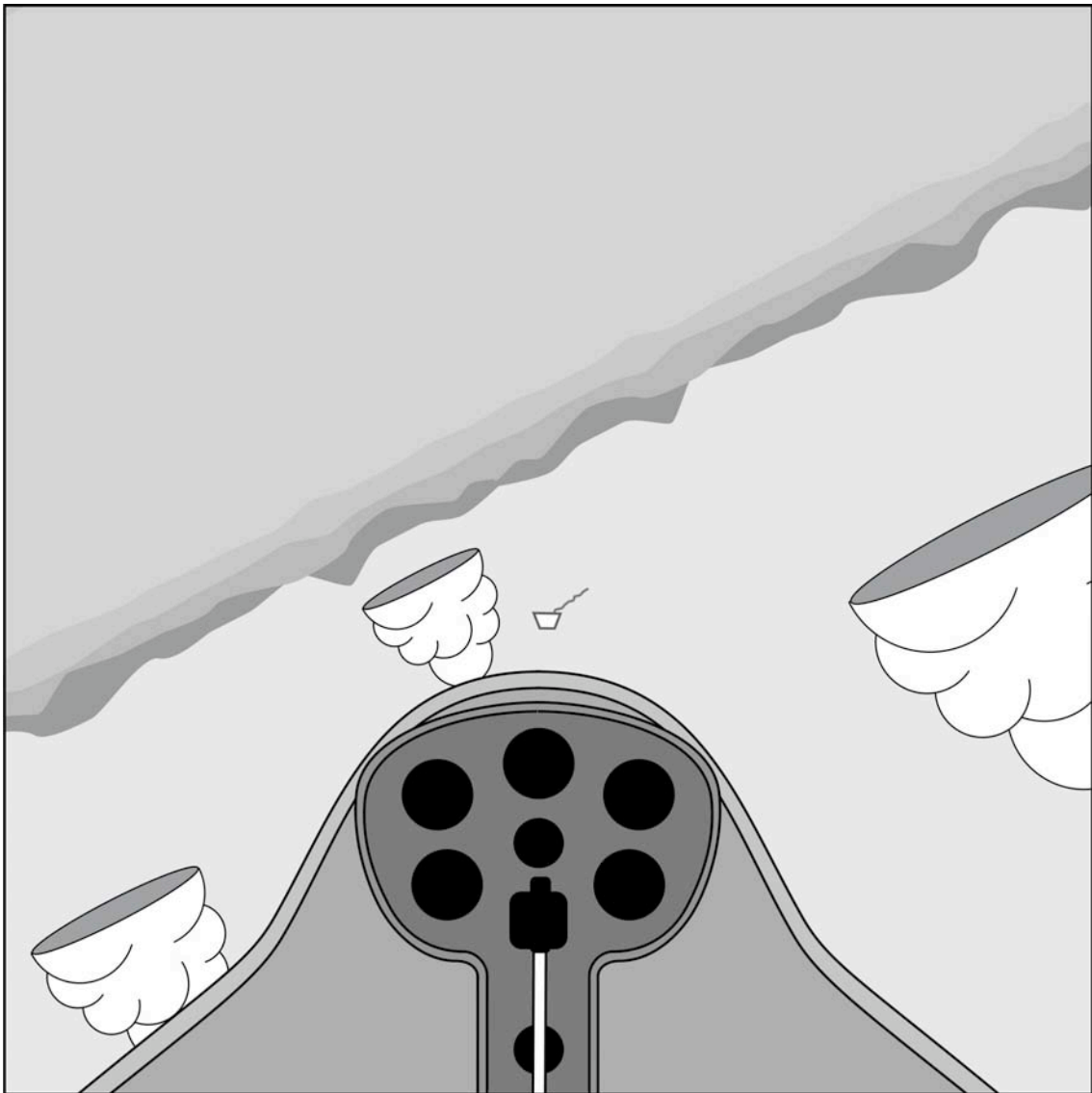


CHAPTER 8: EMERGENCY PROCEDURES

Sometimes things go wrong. Perhaps you hit severe turbulence while on tow, and the towrope breaks. Or you find yourself in an unusual attitude as the result of an unexpected encounter with a rotor. You are much more likely to successfully recover from these situations if you have practiced them during your training. In this chapter, you will learn how to cope with various emergency situations.



8.1 Introduction to Premature Aerotow Release

Purpose

In the event of a premature aerotow release (i.e., a rope break or tow hook malfunction), you may only have a split second to react. It is important that you have a plan of action, so that all you have to do in an emergency is carry out the plan. In this lesson, you will learn how to plan for premature aerotow releases. In later lessons you will practice executing your plan.

Procedure

Rope break procedures vary from airport to airport. What is given here is an overview of the general options. Make sure you understand the specific procedures used at your airport.

There are basically three options when the tow is terminated prematurely after takeoff: continue straight ahead, return to the runway to land in the opposite direction from which you took off, or return to the runway using an abbreviated pattern. Which option you should choose depends on your altitude and location at the time of the termination of the tow.

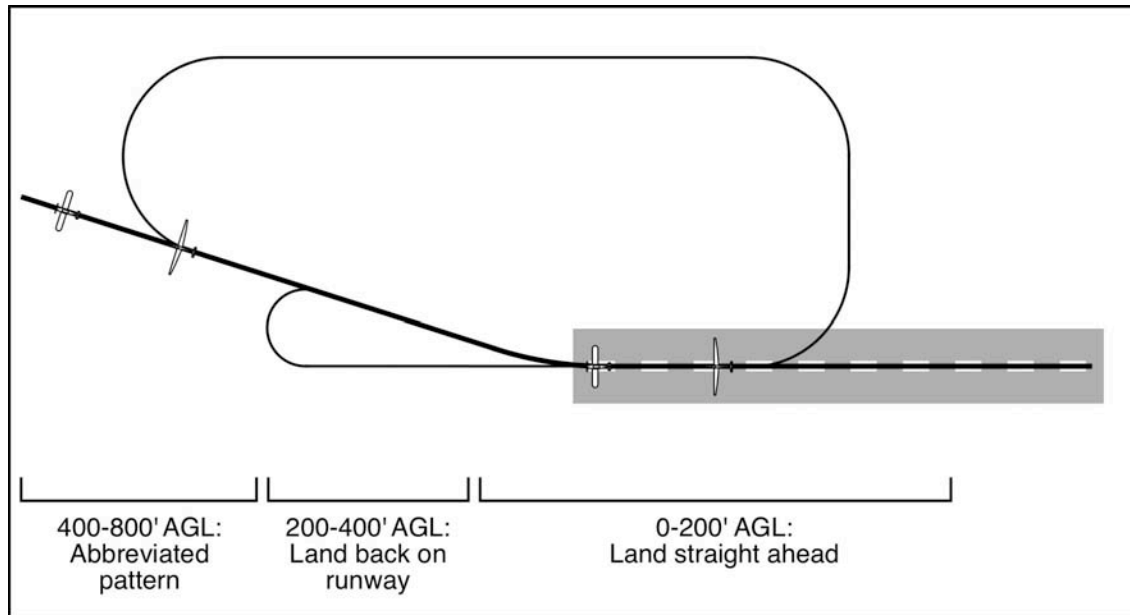


Figure 8.1 – Typical “rope break” plans. The rope break procedure at your airport may differ due to terrain, obstructions, or equipment limitations.

If you have taken off but are below about 200 feet AGL, your plan should be to continue straight ahead and land on the remaining runway if possible, or in the surrounding area.

Once you have passed an altitude of about 200 feet AGL, you should plan to perform a 180° turn and return to the runway for a downwind landing. Often, the tow pilot will veer to the downwind side of the runway after takeoff to make

it easier for you to make this turn should a rope break occur. You should not attempt a downwind landing if the winds are greater than about 10 knots. In higher winds, you should plan to land straight ahead.

Once you have reached an altitude of about 400 feet AGL, you should plan to do an abbreviated pattern. The size of the pattern depends on how high you are. As you climb higher above the ground, you can perform a normal, or near normal pattern.

You should make a plan for dealing with a premature termination of tow before each flight, taking into account the wind, traffic, and any other factors that might affect your plan. For the preflight checklist item "emergency plan", you should review your plan with your instructor.

You should monitor the radio during takeoff so that you will know of any traffic that might conflict with your rope break plans. For instance, if someone reports that they are taking off right after you, a 180° turn back to the runway may not be an option.

Your instructor will have you call out the transition points in your plan as you climb on tow. On a typical flight, you might make the following calls:

On runway:

"Land on runway."

Once landing on the runway is no longer an option:

"Land in field over the airport fence."

Once 200 feet AGL is reached:

"Perform a right 180° turn for a downwind landing."

Once 400 feet AGL is reached:

"Perform a left abbreviated pattern."

Once 1,000 feet AGL is reached:

"Normal pattern."

It is important to plan which direction you will turn in the event of a rope break. At low altitudes, hesitation or a turn in the wrong direction may eliminate a safe option.

Common Errors

- Failure to review your rope break plan before taking off
- Failure to announce when your options change as you gain altitude
- Failure to monitor the radio/airport environment for possible traffic conflicts

Completion Standard

This lesson is complete when on every flight, for each segment of the tow, you review your rope break plan with your instructor before takeoff, and call out the transition point in your plan as you climb on tow.

8.2 Simulated Rope Breaks

Purpose

In the previous lesson, you learned to make a plan of what to do in case the tow was terminated prematurely. In this lesson, you will practice executing that plan.

Procedure

The maneuvers required to recover from a rope break at low altitude are easy to perform on their own. However, if you do not have a plan, and the rope break catches you off guard, the surprise and shock can fluster you, significantly lowering your performance. The key to performing well when the rope breaks is to ALWAYS expect the rope to break.

General

Your instructor will demonstrate the different rope break procedures, and will warn you before pulling a rope break on you the first time. After that, you are on your own! Your instructor may surprise you at any time by pulling the release. Don't be surprised to have the rope "break" every time if you don't call your plan out loud!

When the rope "breaks", your first priority is to fly the glider. Get the nose down to maintain pattern airspeed, and then execute the plan that you have already made. It is important to note that at this point, there should be NO decisions to be made: you simply have to fly your plan.

If time permits, make a radio call to let other pilots know your intentions. Keep in mind, though, that your first priority is to fly the glider. Only use the radio if you have plenty of time to do so.

Do not open the airbrakes until you are sure that you will make the runway. On the other hand, do not forget to open the airbrakes when necessary to keep from overshooting the runway.

Do not fixate on a given spot on the runway. Just because you normally touch down "on the numbers" during a normal landing does not mean you have to extend a low downwind to touch down at the same point when the rope breaks. If you start getting low on downwind, turn base while you still have plenty of altitude to complete the turn safely!

Many students get nervous during a simulated rope break and try to get the glider on the ground as quickly as possible. Remember to bleed off your airspeed before touching down. Don't force the glider onto the ground before it is ready.

Landing Straight Ahead

Below about 200 feet AGL, your only option is to land straight ahead. If there is enough runway remaining, land on it. If not, you may need to make a turn to avoid obstacles, but keep the turn gentle and shallow.