2014 MSC SAFETY MEETING

Updates And Reminders

- Pattern Tow
- Glider release procedure
- Confirming two way radio communication with tow pilot
- Radio contact with FOO cart
- Changes in Class Bravo Airspace
- MSC Soaring Camp

Pattern Tow Procedure

- Tow pilot is informed that this will be a “pattern tow”
- Tow pilot flies such that the glider can release at 1200 feet AGL near the starting point of the 45 degree entry leg
- Glider releases at 1200 feet near the starting point of the 45 degree entry leg
- Glider lands first
- Towplane lands after the glider

Glider Release Procedure

- After clearing for the tow plane and the glider the glider pilot pulls the release.
- When release is visually confirmed the glider turns to the right continuing the turn with excellent lookout until the tow plane is visualized and satisfactory separation confirmed.
- As an alternative the glider may turn 45 degrees to the right while keeping the tow plane in sight and may straighten out after confirming satisfactory separation

Confirming Two Way Radio Communication

It is expected that all glider pilots will confirm two way radio communication with the tow pilot before the launch commences.

Radio contact with the FOO cart

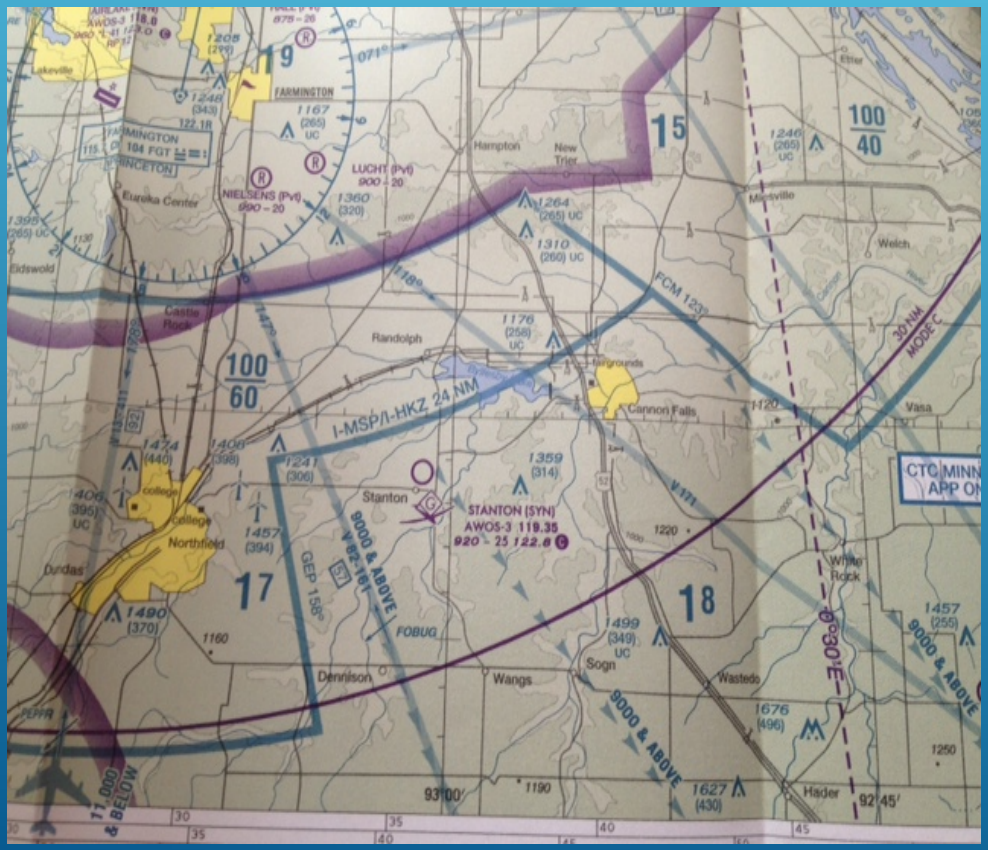
- MSC does not have a "ground station" license to use 122.8 for contacting the FOO cart from the air.
- Airborne glider pilots should use 123.3 to contact the FOO cart.
- The FOO cart has two radios – one tuned to 122.8 and one to 123.3
- The following transmission is recommended –

  "Stanton Ground, Glider XYZ"

  Then wait for response from the FOO

Changes in Class Bravo Airspace

NEW



OLD

MSC Soaring Camp

- Three Days in May – May 21 through May 23
- At Stanton
- SSF ground school – Introduction to Cross Country Soaring
- Lead and follow
- Stanton Short Task
- Briefings on many topics such as Badge and Record flying, Speed tasks, OLC, SeeYou, Weather, Speed to fly, Competition, Turn Area Tasks and more
- Evening cookouts
- Spot landing contest
- Disassembly and reassembly of the Junior
- And Much More!!!!!

Question #1

You are in the Junior on aero tow at 1500 AGL 2nm NW of Stanton. Something catches your eye, and you look to your right, and see that a motorglider (climbing under power) is in a left turn, extremely close, on a collision course. What should you do? Who has the right of way?

Answer #1

- This is an emergency! Release the rope immediately and turn away as necessary
- Make a call on the radio
- Tow plane/glider combination had legal right of way but that hardly matters

Question #2

You are solo in the K21 waiting for an aero tow. You do your prelaunch checks and find there is no response from the tow pilot when you ask for a radio check. What should you do?

Answer #2

- Stop the launch
- Check for an easy fix. Does the tow pilot have the radio on and listening?
- Check glider radio – is battery switch on? Battery installed and connected? Cables connected with radio?
- If no easy fix, grab a handheld radio and confirm two way radio communication prior to launch
- If no handheld available discuss with both the FOO and tow pilot and consider launching without glider radio

Question #3

You take an aero tow in a glider with a belly hook. At 400 AGL you fly into a sudden, huge surge of lift. What is the potential danger?

Answer #3

There is a danger of "Kiting" (going too high), losing site of the tow plane. Release immediately if that happens. "Upset accidents" are a great danger to the tow pilot.

1. Vertical Tug Upsets

In a vertical tug upset the glider gets high behind the tug and the tug nose is forced down. The slingshot vertical upset is particularly dangerous. If the glider pilot is low in relation to the tug and the pilot moves back into position too quickly the glider in effect does a winch launch behind the tug which tips the tug into a vertical dive. In a lateral upset the glider is too far to one side.

The circumstances which make tug upsets more likely are:

- belly or C of G hook intended for winch launching
- short rope
- pilot with little aero tow experience
- near aft C of G
- turbulent conditions
- all flying tailplane, or light elevator forces

Vertical upsets are more likely with a belly hook but can occur with a nose hook.

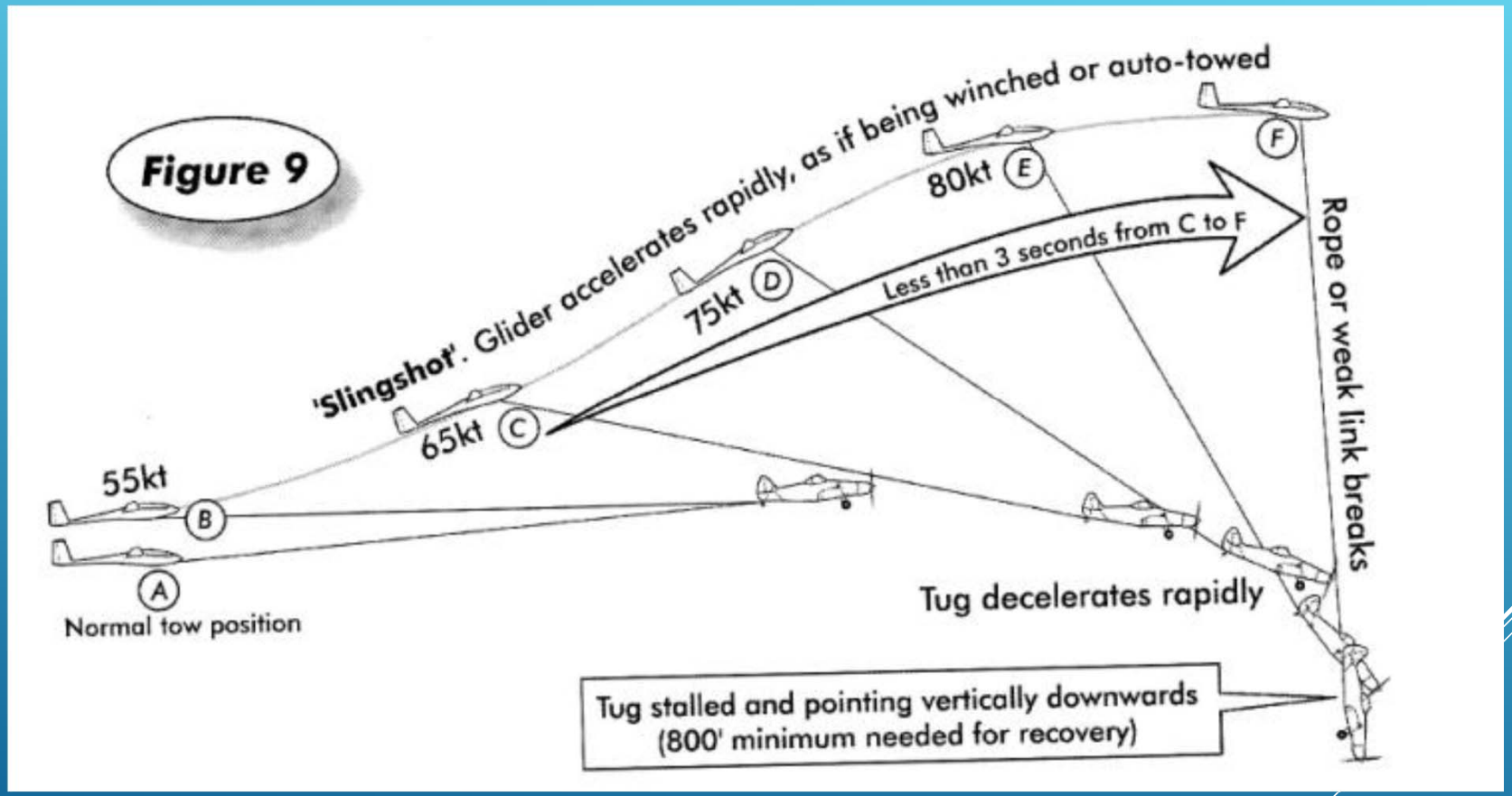


Figure 9
'Slingshot'. Glider accelerates rapidly, as if being winched or auto-towed
80kt
E
F
75kt
D
Less than 3 seconds from C to F
Rope or weak link breaks
65kt
C
55kt
B
A
Normal tow position
Tug decelerates rapidly
Tug stalled and pointing vertically downwards
(800' minimum needed for recovery)

Here is a very nice BGA presentation, which includes pointers to a couple of vivid animations.

http://www.gliding.co.uk/bgainfo/safety/documents/safeaerotowingleaflet.pdf

Question #4

You see a respected, experienced club pilot make an unusually low approach that does not look safe to you. They land safely, and no one else seems to have noticed. What should you do?

Answer #4

Notify the FOO or Duty Instructor. They will notify the Chief Instructor if necessary

Question #5

- You are soaring at 5000 MSL directly over Stanton. What Class Airspace are you in? Where is the nearest Class Alpha, Class Bravo, Class Charlie, Class Delta and Class Golf airspace?

- Which airspace can you enter without radio calls?

Answer #5

- You are in Class Echo airspace.
- Class Alpha is above you at 18,000 MSL.
- Class Bravo is just a few miles to the north.
- Class Charlie is a long way away - Madison?
- Class Delta at St. Paul and Rochester.
- Class Golf is below you anywhere none of the other Classes are in effect.
- You can enter Class Golf and Class Echo without radio contact.

Question #6

List the problems that can result from a low approach on final and the solutions to these problems

Answer #6

- Problem: Pilot attempting to extend final glide by raising the nose resulting in possible stall/spin.
- Solution: Fly appropriate airspeed throughout the pattern – even if too low to reach the runway.
- Problem: Low turn resulting in snagging wing on the ground.
- Solution: Turn to base earlier.
- Problem: Gusts or sink causing a stall.
- Solution: Add extra air speed and altitude in gusty and high lift/sink flying conditions.

Answer #6 (continued)

Problem: Distraction or tunnel vision resulting from flying low in the pattern resulting in failure to close the spoilers, set flaps appropriately, fly coordinated turns, and attend other traffic in the pattern or on the runway.

Solution: Regardless of the difficulty of the situation keep flying the glider, use crew management resources to ask for help from the FOO or other aircraft in the patter to decrease distractions, and practice difficult landings with a flight instructor – research shows that practicing high stress situations increases good practice when high stress occurs in actuality.

Answer #6 (continued)

- Problem: Landing short of the runway.
  Solution: Consider alternate landing sites if possible – especially if flying low across Highway 19.

- Problem: Conflict with other traffic in the pattern.
  Solution: Ask for power traffic to go around. Land on cross runway. Land out if necessary. Communicate with a glider in front of or behind you and determine which glider lands short and which lands long

Answer #6 (continued)

Problem: Rigid adherence to the traditional pattern resulting in being too low on final.

Solution: Consider the pattern an adaptable suggestion rather than a rigid requirement. Change the pattern as necessary to land safely including turning to base before the beginning of the runway, or landing on cross runway

Question #7

It's a windy and gusty day at Stanton. How should the FOO and PIC move and secure a glider?

Answer #7

- FOO should send at least two people to retrieve gliders. PIC should stay in the glider with the spoilers open and hand on the stick and feet on the rudder pedals until wing runner secures a wing
- Wing runner on each wingtip
- "In a very strong wind the critical place for ground handling is at the tail. Always make sure the person on the tail is briefed to hold it up until someone has their weight on the nose. After coming to a stop with the glider facing into the wind, holding the tail down is the worst possible thing, and even leaving the nose unattended for a few minutes is dangerous. It is always safest to transfer the person on the tail to the nose, where his extra weight can be more effective."

Derek Piggott, Gliding Safety, page 17

Answer #7 (continued)

Don't ever leave a glider unattended unless:

- The glider is quartered away from the wind
- A weight is on the down wing
- The spoilers are belted open from the front seat
- The canopies are closed and latched
- The tail dolly is removed (MSC Junior)

If the wind gusts exceed a critical speed the operation should be stopped!

Question #8

As a glider pilot how can you maximize the tow pilot's safety?

Answer #8

If you ever lose sight of the tow plane release immediately regardless of your airspeed, location and altitude!!

Answer #8 (continued)

Communicate before, during and after the tow

1. Let the tow pilot know before hand if you are doing anything other than a standard tow such as boxing the wake
2. Always perform a radio check confirming two way communication with the tow pilot as part of your prelaunch check list
3. Be a second set pf eyes for the tow pilot and announce other traffic that may be a potential conflict
4. Acknowledge release after tow

Answer #8 (continued)

- Know the SSA airborne signals, and respond to them immediately, especially know the release immediately signal.
- Know your airborne signals and be proficient in performing them.
- When you are out of practice on slack lines, airborne signals or boxing the wake, have a flight instructor with you during practice before you do so on a solo flight.
- Be clear about who is landing first on low releases and "pattern tows".

Question #9

How do you maximize safety when landing with a strong cross-wind?

Answer #9

- Crab or side slip on downwind, base and final.
- Side slip with the "into wind" wing lowered.
- Practice side slips frequently to maintain competence in this maneuver. If you are out of practice ask a flight instructor for additional instruction.
- Recognize how the cross wind will impact your ground speed during all phases of the landing pattern and compensate with changes in the way you fly the pattern.
- Eliminate drift before touchdown with either side slip or crab which is "kicked out" with rudder before touch down.
- Remember the effect of cross wind once the glider has touched down – it will try to turn you into the wind. This effect is more difficult to prevent as the glider slows, airflow diminishes and the rudder becomes less effective.

Question #9

You are giving a demonstration flight in the ASK21. The wind is from the NW at 16, gusting to 19. You take off from 36 and at 1,600 MSL the pilot in SN 511 announces he is entering the dogleg at 1,800 MSL. At 1,750 MSL the tow plane rocks its wings and the tow pilot simultaneously announces he has lost engine power and will make an emergency landing on 09. Describe in detail all the steps you will take, including airspeeds, checklists and decision points.

Answer #9

- Release immediately and do a climbing clearing turn to the right.
- While turning to enter the pattern for 36 promptly get a visual fix on the tow plane and the Junior as well as scanning the pattern/airspace for other aircraft, and determining what is occurring on the runway. It would be prudent to also scan for aircraft landing on 27.
- As opportunity allows speak to calmly to your passenger briefly explaining what is occurring and ask them to advise you of any other aircraft they spot.
- Do not speak on the radio unless safety concerns make it necessary to do so. The emergency declaration by the tow pilot mandates that all radio talk shall cease except for communications by the pilot who declared the emergency and anyone assisting this pilot.

Answer #9 (continued)

- There are two options for landing: landing on 36 or landing out. Assume landing on the field is a possibility.
- Keeping the tow plane and Junior in sight enter the pattern for 36, in a crab – however fly at minimum sink so as to maximize separation and allow events on the airfield to settle. Consider turning to base very early (over the field) and landing on the back half of 36.
- Do your landing checklist. Target airspeed at some point will be 34 knots + 17 knots + 8 knots = 59 (60) knots.
- Speed up and trim for 60 knots before turning base.
- Keep a lookout for other aircraft in the pattern, especially at the cross runway.
- If it is likely the tow plane or the Junior will block the middle of 36, turn early and land on the last half of 36.

Answer #10 (continued)

- Turn base in a coordinated turn and establish a crab. Clear to the right for aircraft landing on a long final. Determine where the tow plane and Junior have stopped. See if there are any other potential obstacles such as people rushing out to either aircraft.
- Turn final in a coordinated turn and either establish a crab or a side slip. Maintain airspeed. Fly well over Highway 19. Land and pull off in a direction that minimizes the risk of striking another aircraft, this may necessitate a turn to the left.
- Stay inside the cockpit until a wing runner arrives to secure a wing.

Question #11

Prior to coming to the airport, name 4 things you can do that could increase the safety of your flying that day.

Answer #11

1. **Check the hourly weather forecast** for clouds, winds, precipitation and sever weather
2. **Check for NOTAMs** of all areas and airports that may be on your possible flight routes
3. **Check your health status** – IMSAFE checklist
4. **Run through your "Going to the Gliderport" checklist** that includes food, drink, soaring hat, sunglasses, water bottle, ……

Question #12

Name something you check during your preflight that may not be specifically on the official list but one you feel is vital to check, and why?

Answer #12

- Full functionality of the radio
- For the A of ABBBCCCDE I include all instruments on the panel – radio, flight computer, electronic vario etc. I also verify two way radio communication with the tow pilot prior to takeoff

What are yours??

Question #13

What are the right-of-way rules to avoid collisions with other aircraft?

Answer #13

Sec. 91.113

Right-of-way rules: Except water operations.

(a) Inapplicability. This section does not apply to the operation of an aircraft on water.

(b) General. When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.

Answer 13 (continued)

(c) In distress. An aircraft in distress has the right-of-way over all other air traffic.

(d) Converging. When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way. If the aircraft are of different categories--

(1) A balloon has the right-of-way over any other category of aircraft;

[(2) A glider has the right-of-way over an airship, powered parachute, weight-shift-control aircraft, airplane, or rotorcraft.

Answer #13 (continued)

(3) An airship has the right-of-way over a powered parachute, weight-shift-control aircraft, airplane, or rotorcraft. However, an aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft.

(e) *Approaching head-on.* When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

(f) *Overtaking.* Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right to pass well clear.

Answer #13 (continued)

(g) *Landing*. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching an airport for the purpose of landing, the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.

Question #14

In doing the preflight you noticed that one of the trim tabs on the OWL is not working properly. You should:

a) Note it in the daily inspection book, but go ahead and fly it since the other tab is good

b) Tape it in the neutral position, and go ahead and fly

c) Set the trim control to neutral, and go ahead and fly

d) Decide not to fly it but tell the FOO to warn others

e) Ground the glider (what Far applies to justify grounding?)

Answer #14 (continued)

Sec. 91.7 — Civil aircraft airworthiness.

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when not airworthy mechanical, electrical, or structural conditions occur.

The answer is E. The airworthiness certificate for the Owl was issued with full operational trim tabs only. If one trim tab is not working properly then the OWL is NOT currently airworthy. Ground the glider and notify the Director of Equipment.

Question #15

What does the Soaring Safety Foundation recommend regarding the first flight of the season for all glider pilots?

First Flight

The Soaring Safety Foundation recommends that all glider pilots take their first flight of the season with a flight instructor.

This concludes the

2014 MSC Safety Quiz

Connect with one of the MSC instructors before you leave and have a new Qualification Card completed.


03.11.2014