

WARM AIR 14 Nov 20

Aviation Sports Club Gliding Newsletter

THIS WEEKEND:

Club Cellphone 022 357 6731

www.ascgliding.org

Saturday

Instructing: Ray Burns

Bank Acct 38-9014-0625483-000

Towing: Peter Thorpe/Gus Cabre

Duty Pilot Kishan Bhashyam

Sunday

Instructing: Ivor Woodfield

Towing: Rex Carswell

Duty Pilot Kris Pillai

**SUNDAY WE HAVE ATC CADETS - EARLY START AND HELPERS PLEASE
MEMBERS NEWS**

SATURDAY AND SUNDAY

Unfortunately, the towplane did not come out of its annuals in time so no Towplane, no gliding and no report.

WE HAVE ATC CADETS THIS SUNDAY

We are hosting 30 Squadron ATC this Sunday. Can we please have an early start and some helpers.

CFI CORNER

Membership Forms.

There are still a number of membership forms outstanding. If you have not yet done so please get one filled out and sent to either Lionel or me.

THE OTHER END OF THE TOW ROPE

Before I get started, I want to make something very clear. I have been a tow pilot for about a year and a half now and in no way have the experience like some reading this may have when it comes to towing gliders. But one thing that I've noticed is that most tow pilots have a glider rating, however, most glider pilots do not tow. So that was the inspiration for this article, let me put you in the perspective of flying the towplane. Because as some may forget, even though soaring is a hobby and passion; there is another life, just like yours on the other side of that rope.

More tug upsets than ever

The British Gliding Association has compiled data over the past few decades and came together with this information. Between 1978 to 1985 there were five fatal incidents, after that, the incident rate went to less than one per year until 2008. From 2008 to 2018 the frequency went to three per year, and in 2019 there were seven fatal accidents. My point is this, we need to do better than this as glider pilots, tug upsets are preventable. But when you become complacent on aerotow, you are putting someone's life in jeopardy. Period.

Towing, from the tow pilots point of view

Think of it like Newton's Third Law, for every action, there is an equal and opposite reaction. That same theory applies to aerotow. Let's say you are in a 2-33 that weighs about 1,000 LBS give or take, attach

that 2-33 to a towplane with a standard 200 FT tow rope and you now have a lot of weight and a lot of responsibility to maintain safe position during the tow.

The glider gets high on tow...



Much like a see-saw, if the glider gets high the weight being exerted by the glider to the towplane is raising his tail because we are essentially lifting it up. And if that tail is getting high, his nose is getting forced down.

So, the glider gets high, the tow pilots' nose gets pushed down and they begin to bring aft elevator to keep the pitch from changing. At this point, if I am towing and I am having to feed in some back pressure all of the sudden I am on high alert. Hugh Grandstaff, who has written in this same newsletter, told me when I got my towing endorsement is when I start having to compensate on my end for what the glider is doing. My hand should be headed towards the release so I am ready to release from my end if the situation begins to get worse. I am still flying my airplane, prepared for release if I have to, and eyeballing that glider in my mirrors. Most times the glider pilot will fix their mistake and get back in normal position, except for a few rare times. However, if I begin to run out of control authority I have no problem snatching my release and feeding the glider pilot their tow rope.

The glider pilot gets low on tow...

Here we have a bit more control of the situation. What we consider "high tow" is actually level with the towplane, and what we consider "low tow" is below the wake. The situation becomes the same but just in reverse. If the glider begins to become extremely low the tail will be forced down and the nose will be pushed up. Again, if I start running out of control authority in the towplane, I will release and you will get the rope.

The glider pilot gets way too far out to either side...

If the glider gets too far out of either side, the tow pilot will begin to lose rudder. If you are way out to the right, my nose is going to begin yawing to the left so I must compensate with right rudder. And just like what you have read above, when I start to run out of rudder authority, I will release and you will get the rope.

What makes a safe tow... safe?

This rule applies to anything in aviation, always fly the airplane. Fly the airplane if the canopy comes open at 100 FT AGL, fly the airplane if a snake is crawling up your pant leg, fly the airplane if you realize after liftoff that your tail dolly is still on, or even when you want to adjust that Cambridge vario volume to be louder since the wind going over the canopy is too loud to hear it, fly the airplane. Fly the airplane into the trees if you find yourself over nothing but forest. Always. Fly. The. Airplane. When you stop flying your airplane, your chance of damage to the plane, the tow pilot, and yourself skyrockets.

What is one of the many things that we as glider pilots do that power pilots don't worry about? Aerotow. So when that canopy flies open and you are still on tow, you fly your airplane, and part of you flying your airplane is to make damn sure you are in a safe position relative to your towplane. If you are not in a safe position behind the towplane, you need to release. And if you have lost sight of your towplane and haven't released already as you should have, you were not flying the airplane.

Factors that can lead to unsafe aerotows

-Glidern with C.G. hooks

Take this comment with a grain of salt. Flying a C.G. hook equipped glider is only dangerous if you let it be, just flying with a nose hook can be dangerous if you let it be. A glider with a C.G. hook is literally being towed from the center of gravity of the sailplane, this results in the glider being more sensitive and more chance of pitch oscillations than a traditional nose or chin hook. But do not fall victim to thinking that just because it has a C.G. hook means you shouldn't buy or fly that particular glider.

-Lack of experience with aerotow

Just like anything, if you don't have much experience on aerotow, especially in bumpy conditions, consider going up with an instructor and feeling more confident before going solo. There is absolutely no harm in asking for some help.

-Bumpy Conditions

Guess what, our best distance and duration flights often come at the cost of having a bumpy aerotow. When it's bumpy do not be afraid to be a bit aggressive with your control inputs if it results in staying right behind your towplane. It's better than being gentle and finding yourself with a ridiculous amount of control deflection and most times a slackline bow.

There are many more factors, and I highly encourage you to read about these in your training books.

The main point

The point is this, fly your airplane and think about how you getting complacent while on tow can have fatal results. If at any point you feel like you are unable to control or fix your position on tow and are nearing or already at a dangerous position. **RELEASE**. And if at ANY point you lose sight of your towplane, **RELEASE**. Even if it means a straight-ahead landing off-airport. I think a large factor of why gliders take so long to release (if they do) once they become dangerously out of position is because they tell themselves in their head "this can't be happening to me!" and try to normalize it, and while this is happening you are just getting, even more, out of position. Guess what, it can happen to you, and if you need to release, do it. Don't try to normalize something that is NOT normal. We as glider pilots are better than this, but we need to fly our airplane, we need to maintain proper tow position, and we NEED to remember the consequences if we don't.



Collin Shea soloed at 14 years old in 2014 and hasn't looked back. He currently has access to a Standard Cirrus "ML" thanks to Eric Anderson from Texas Soaring Association. If he is not in a glider he can usually be found in a tow plane or his father's Stinson 108-2. Collin is currently instructing and towing at Sky Sailing and living the life of a professional glider bum.

TOW OUT GEAR ACCIDENTS



Editors Note: Even when taking precautions tow out gear accidents happen. A report from this accident pictured above. " I heard a metallic sound and saw a wing lift in the rearview mirror, so stopped the pickup. Immediately its left-wing smashed against the tailgate while the tail went swiftly past the driver-side window and slammed into the front fender. Putting this together analytically, a powerful whirlwind (dust devil, if there had been dust) had pounced. The tail dolly had been split at the hinges, releasing the glider to be driven forward."

I should start with a disclaimer. I run Yankee Composites a repair station, specializing in composite sailplanes. I also am the US Representative for Schempp-Hirth. The disclaimer is if you don't follow this advice I can help you purchase your new glider or help you fix your broken one.

SLOW THE F&K DOWN

If you can't walk along the side of your car while towing, you are going too fast. If your windows are up with the radio on, you probably are not paying attention to what is going on outside.

Tow out gear is very convenient you do not have to walk your wing like it is 1960. It is also great job security for me. I have yet to be at a contest where something was not damaged by the tow out gear. This damage not limited to, split elevators, split rudders, removed rudders, aileron damage, runway lights plucked from the ground, corporate jets grounded, hangers scratched (the winglet suffered worse), broken rear windows.

TREAT IT LIKE YOU MEAN IT

Your 40 yr old glider that you inspect every year, you keep in a hanger and never leave it outside, is well taken care of. I have written in the past about neglecting your trailer. But I have never mentioned the tow out gear you leave out in the rain and sun when you fly, toss into the back of the car when not using, drop in the ground when you remove from the glider, you know those three pieces you do not treat as well as your glider.

You somehow imagine that those Home Depot latches and hinges riveted through a few layers of glass are going to perform miracles and stay together all these years? When a hinge is held in by 3 rivets and 2 are clearly loose, you are playing on borrowed time. You are towing your \$260,000 glider hoping that 6 rivets don't snatch right out.

Pay attention to where you are going. Drive with windows down, paying attention in the mirrors, remember your car might be 2 meters wide, but the glider behind you is 15 meters. Even after the driver asked me "Are we clear?" I looked out the window and said "Yes", we still hit a post. I still have nightmares of that fateful drive. (*editors note: I still have the FAI SGP flag from that post you hit as a souvenir.*)

The land speed record was an ASG29 in Finland full of water approaching 30mph. The entire grid watched in anticipation. It was uneventful this time but would have been epic.

WIND

There is nothing sexier than the Concordia towing out to the grid with its 2 wing wheels. Those of us that don't want two wing wheels many times hang a gallon of water or a parachute on the tip to help keep the weight on that wing wheel.

There is a lot of surface area. One taxiway you might have a crosswind from the left holding the wing wheel on the ground the next might be trying to lift it up. This is bad. Now the glider is leaning over and dragging on that wing. Putting a lot of side load on the tail dolly and those 6 rivets.

BRAKES

Slamming on the brakes puts all that side load and now all the rolling mass and moves it forward. Something might give, and the glider tail goes crashing into the car. Composite gliders are strong but they are not built for impacts on the control surface backwards...

As you see the wing rotating slow down you can stop before it hits the ground. This should be easy because you are only going at a walking pace.

Thanks for your time, everyone! Your new tow out gear is available from Wings and Wheels, and your expensive repair (Closely followed by new tow out gear) is available from our local Glider Maintenance companies!



Garret Willat holds a flight instructor rating with over 8000 hours in sailplanes. His parents have owned Sky Sailing Inc. since 1979. He started instructing the day after his 18th birthday. Since then, Garret has represented the US Junior team in 2003 and 2005. He graduated from Embry-Riddle with a bachelor's degree in Professional Aeronautics. Garret represented the US Open Class team in 2008 and 2010 and the Club Class team in 2014. Garret has won 3 US National Championships.

GLIDING EVENTS CALENDAR 2020/21

[Omarama South Island Regionals \(TBC\)](#)

-Sat 14th Nov 2020 - Sat 21st Nov 2020

[Matamata Northern Regionals](#)

practice 28 Nov + 7 comp days 29 Nov to 5 Dec)

[Springfield Soaring Championships](#)

-Sat 28th Nov 2020 - Sat 5th Dec 2020

For further info see

<https://gliding.net.nz/events/?gnz=true&other=true&type=all&timerange=future&pageView=summary>

[Matamata Air Cadet Camp](#)

- 7th - 11th December 2020

[Omarama YouthGlideNZ camp](#)

-Thu 10th Dec 2020 - Sat 19th Dec 2020

[Matamata Sailplane Grand Prix \(4 comp days 27 to 30 Dec\)](#)

-Sun 27th Dec 2020 - Wed 30th Dec 2020

[Omarama Nationals \(practice day 01 Jan + 9 comp days 02 to 10 Jan inclusive\)](#)

-Fri 1st Jan 2021 - Sun 10th Jan 2021

[Auckland Enterprise \(practice day 16 Jan + 7 comp days 17 to 23 Jan inclusive\)](#)

-Sat 16th Jan 2021 - Sat 23rd Jan 2021 @ Drury

[Matamata Club Class and MSC \(practice day Fri 29 Jan + 9 comp days 30 Jan to 7 Feb\)](#)

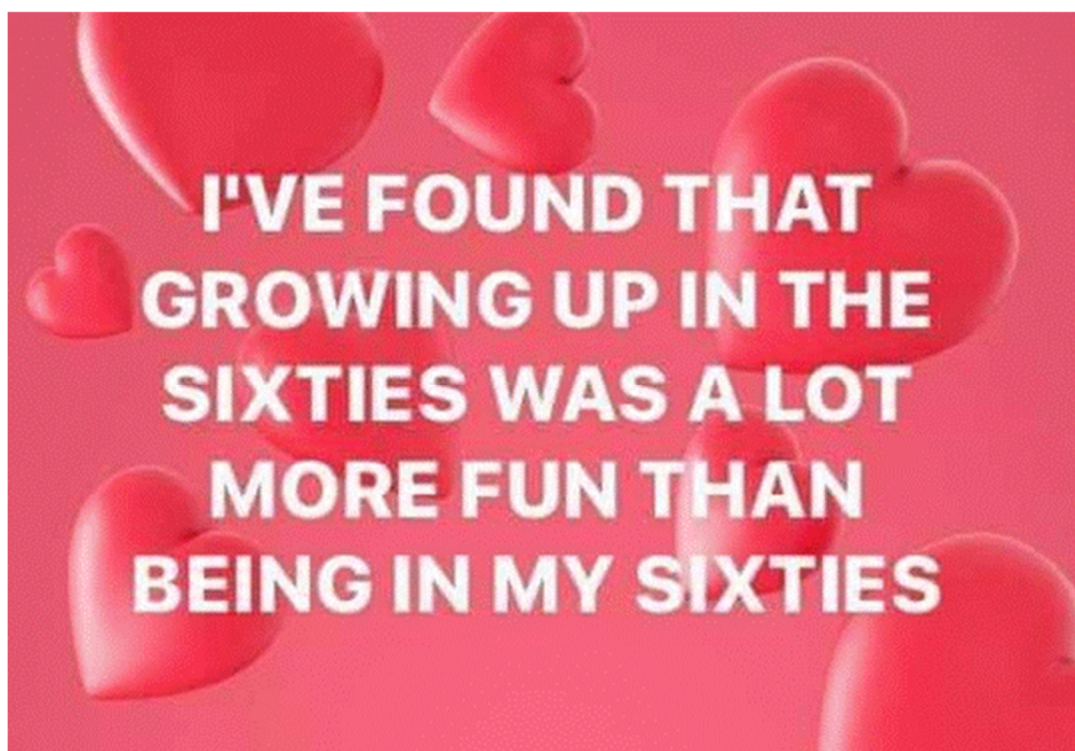
-Fri 29th Jan 2021 - Sun 7th Feb 2021

[Vintage Kiwi Rally @ Te Kuiti](#) Camp Gliding New Zealand Te Kuiti

Sat 6th Feb 2021 - Sat 13th Feb 2021 Tow plane = Fox Bat LSA

[\(Waipukarau\) Central Districts Regionals](#) Competition Gliding Hawkes Bay & Waipukarau Inc Waipukarau

Sat 20th Feb 2021 - Sat 27th Feb 2021



Printing Conventions: Any contribution will have the author's byline; Anything in Italics is either a byline or an editor comment; Tailpiece is the editorial.

Duty Roster For Nov, Dec 20

Month	Date	Duty Pilot	Instructor	Tow Pilot	Notes
Nov	14	K BHASHYAM	R BURNS	P THORPE / G CABRE	
	15	K PILLAI	I WOODFIELD	R CARSWELL	30 SQN ATC
	21	G LEYLAND	S WALLACE	D BELCHER	30 SQN ATC
	22	I O'KEEFE	L PAGE	F MCKENZIE	
	28	M MORAN	A FLETCHER	R HEYNIKE	
	29	T O'ROURKE	R CARSWELL	P THORPE / G CABRE	
Dec	5	R BAGCHI	P THORPE	R CARSWELL	
	6	T PRENTICE	R BURNS	D BELCHER	
	12	R WHITBY	L PAGE	F MCKENZIE	
	13	I BURR	S WALLACE	R HEYNIKE	
	19	C DICKSON	R CARSWELL	G CABRE	
	20	K JASICA	I WOODFIELD	P THORPE	