Tow Pilot Meeting Talking Points

## Revised April 11, 2021

## Preflight

* Review club aerotow procedures, parts 61.69 and 91.309
* Standard walk around
* Fuel and oil
	+ Minimum oil: 11 quarts Pawnee, 7 quarts Husky (don’t start towing if below these minimums)
	+ Start with enough fuel for at least 8-10 tows (2 gallons/tow=18-20gallons, plus an FAR 30 minute reserve, 5 or 6 gallons) Check Wt & Bal on Pawnee (i.e. 14gal minimum for 180# pilot)
* Tow rope
	+ Rope strength and use of weak links
	+ Inspect for wear, especially at tow rings
	+ Check for knots
* Inspect release, and check for proper operation
* Normal run-up and one lap around pattern in cold weather (below 50 F). Optional in warm weather
* Takeoff performance – Glider, wind, runway condition and density altitude considerations

## Ground operations, takeoff and tow

* If parking near the hard surface, angle tow plane so that it’s obvious you’re not about to takeoff on the hard surface.
* Be vigilant during ground operations – wing runners, spectators, carts, prop blast etc.
* Don’t point tow plane tail at glider when taxiing to take up slack
* Don’t do engine run-ups with tail pointed toward persons or gliders
* Taxi no faster than a slow jog and hold controls appropriate for wind direction (nose over)
* Tow heavy (ballasted) gliders and Duo-Discus with Pawnee if possible
* If tow plane has an engine failure (partial or total) don’t try and return to the field below 1000’ AGL
* Runway selection (09 preferred when wind is not a factor)
* Signals and use of radio
* Downwind takeoffs – generally not recommended
* Use of flaps (Soft field or hot conditions 10º of flaps then retract at 500’ for the remainder of tow)
* Airspeed to use – maximum/minimum
* Break ground at 60MPH and gradually accelerate to 70MPH (80MPH in Pawnee) as you climb.
* Wind gradient effect during initial climb
* Angles of bank
* Generally plan to position glider upwind of field
* ALWAYS keep scanning for traffic
* Emergencies and PT3 events (if possible, towplane continues to climb away from glider)
* Training glider flights (boxing the wake, slack line recovery)
* Engine temperature management
* Fuel management

## Glider release, descent and landing procedures

* ALWAYS confirm release – rope falling away, glider turning right off tow, radio call from glider
* CLEAR traffic (should be clearing as tow altitude is reached)
* 90 degree left turn for the tow plane, after glider releases
* Reduce power (2,000 RPM Pawnee, 20 inches MP and 1900 RPM Husky)
* Airspeed under 100 MPH (actually 85 MPH works well in the Pawnee with flaps down)
* Descent techniques
* Can use full flaps if desired if not making a spiraling turn
* Can lean mixture if desired
* Decrease throttle 100 RPM (1 inch of MP) every 30 seconds or 10º CHT reduction until 1500 RPM
* Monitor CHT, cool down less than 30 degrees per minute
* Always be aware of the tow rope (trails 200 feet behind and about 50 feet below after glider releases)
* Downwind landings on runway 27
* Rope drop procedure when landing on runway 09 (more than 200’AGL over the road and drop on south side of runway) (gliders will be parked and staged on the north side of the runway)
* Use radio to announce pattern

## Miscellaneous

* **Retrieves**
* Have glider tow in Low Tow position to avoid slack line
* Review maximum towing speeds during cruise flight
* Tow to a higher altitude (i.e. 3000’ minimum) to allow for glider to be able to maneuver if an accidental release occurs during tow.
* Radio communications are important so check before takeoff.
* May need to do a wing down takeoff.
* Don’t tow above any more than a scattered cloud deck
* Use a very gradual level-off and power reduction for cruise flight. Maintain 70-80 mph during cruise flight.
* If a descent on tow is necessary have glider pilot use partial dive brakes for the descent to avoid slack line.
* **Hard Surface Operations**
* Only use with extreme caution
* Need to position a spotter at the West end of the road and at the Northbound road intersection near the hangars.
* Have the caution signs installed in those locations
* If towing have a road checkout with a club tow pilot instructor.
* Sidestep maneuver if landing on the road to the west. Always drop rope before landing.
* Use radios for good communication
* **Proficiency vs Currency**
* Each season review the Aerotow procedures found on the club website
* If you don’t feel confident about your abilities, seek further instruction
* Make a few takeoffs and landings if you need to get comfortable before towing
* 24 calendar month requirements either 3 glider flights or 3 simulated or actual tows while accompanied by a qualified tow pilot FAR 61.69(a)(6).

Pawnee Fuel consumption: 14GPH, usually it averages to about 2 gals/tow

Stall speed 62MPH (Max Gross Weight, Flaps down), 46MPH typical landing weight and flaps down.

75MPH on final