



# **TOW PILOT PRIMER**

September 25, 2004

Revision III

## **SCOPE**

This document is intended to provide you as an LESC tow pilot with basic information regarding what is expected of you as a qualified tow pilot flying LESC aircraft. This document in no way supercedes LESC Standard Operating Procedures (SOP's), requirements of the insurance carrier or Federal Aviation Regulations. This document is merely intended to provide you with answers to many of the Frequently Asked Questions (FAQ's) regarding LESC tow procedures. If in doubt regarding any policy or procedure, please ask the Chief Tow Pilot, Safety Officer or duty CFIG for clarification.

You as the tow pilot are the critical key in LESC operations. LESC is a non profit organization which exists for the benefit of it's membership. Without a tow pilot, LESC does not operate. It is imperative that you be on time and provide quality service to the membership, otherwise LESC will suffer the consequences.

If you are scheduled to fly at 1000, that means your pre-flight is complete and your warmup flight is accomplished and you're ready to tow by 1000. Most 1000 flights are students, however if you hold up the first flights of the day then you may adversely effect the entire days schedule. Be ready to go, even if there is no one there!

Occasionally during the winter months the schedule can be light. It is ok to work with the duty CFIG and arrange to begin operations at noon if no one is scheduled at 1000. Do not however just decide not to show up without prior arrangement as many people drop in on a moments notice.

## **CURRENCY**

14 CFR 61.69 requires you to maintain annual currency as a tow pilot in one of two methods. It is **YOUR** responsibility to ensure you are current and legal to tow before conducting tow operations.

LESC also requires currency in LESC tow planes above and beyond the FAR requirements. Please refer to the SOP's and 14 CFR 61.69 for further clarification.

You will have a pilot record file in the instruction room. It is your responsibility to keep it up to date. Don't get caught with outdated records.

## **TOW PASSES & RECORD KEEPING:**

The insurance underwriter and LESC both require a glider pilot to show a valid tow pass before a tow can commence. This is to ensure the pilot has checked in with the office and is approved to fly an LESC aircraft. More importantly, the insurance carrier requires all student pilots to have obtained the duty CFIG's signature authorizing student solo activity. Without CFIG authorization, no tow pass will be issued.

This is an obviously important procedure that must be adhered to. You as a tow pilot will record the tow pass number and color on your tow log, along with the applicable glider registration number. It is not necessary to record the pilot's name, as this will have already been cross-referenced by the office staff before issuing the tow pass.

You will also need to enter your takeoff time for each tow, and keep track of your ending tach time after each tow along with the AGL release altitude of the glider. Your tow log needs to be turned into the office at the conclusion of the day.

You are the critical point in the authorization procedure. It is vitally important that you enforce the tow pass procedure. You will from time to time probably encounter a member (or non member for

that matter) who will attempt to coerce you to provide a tow without a tow pass. Any tow pilot performing a tow without visually seeing a tow pass will be subject to immediate grounding from flying LESC tow planes and referred to the Membership Committee for possible further action.

When in doubt, remember the policy is: **NO TOW PASS – NO TOW – NO EXCEPTIONS.** Please refer anyone having issue with this policy to the Board, Safety Officer or Chief Tow Pilot.

An exception to this policy is authorized during operations when LESC is not officially open. From time to time, the membership may arrange for a tow pilot to be on hand during good conditions during off days. If the office is not in operation, **licensed pilots only** may obtain tows. No student pilot may obtain a tow unless an LESC CFGI is on the field and specifically authorizes the tow, or if the student pilot is flying with a licensed LESC member or is taking a check ride with a designee. It is your responsibility as the tow pilot to record the pilot's name as well as registration number and ensure the tow log is provided to office personnel for appropriate revenue receipt. It is YOUR RESPONSIBILITY in this case to ensure the Treasurer receives the tow log and the club is reimbursed for any off day towing.

LESC survives due to the contributions of all members. You as the tow pilot must ensure proper revenue tracking takes place.

### **TOW PASS COLORS**

Red: Soloed student. Please be extra careful.

Green: Orientation flight by a Commercial pilot or flight lesson with a CFGI on board. Watch for special requests by the CFGI.

Blue: Licensed pilot or Associate member. Be extremely careful.....

### **TOW TURNAROUND TIME**

Please be as expeditious as possible turning tows around. We should be able to get at least three each an hour if the line is operating efficiently. Please remember, **safety is your first priority**. Not shock cooling the engine is second. Third is getting up and down in an expeditious manner.

Remember, per edict of our landlord, we are only to use 11R/29L to land on. If a runway is blocked, don't orbit wasting gas. You can use 11L as long as you call and let the skydivers know what is occurring. Roll straight out to the launch area turn and point yourself back down the launch if there is another glider in line waiting to go. If not, cross in front of the line, turn around and shut down in preparation for the next launch. If there are gliders on the runway in front of you, or in the pattern following you in, it's ok to taxi on the launch or the old launch way over to the left.

### **LAUNCH & LETDOWN PROCEDURES**

If you takeoff with flaps, retract them when you are at a comfortable altitude. You will find you will climb much more efficiently without them and it'll be far less stress on the engine. Do not conduct tows with flaps down all the way to the top. Recommended procedure is to retract flaps at 200 feet or above. Landing with flaps is recommended except in high wind conditions. Please refer to the Callair manual for further discussion of flap use.

Lean your mixture while you are ascending. Remembering that the field is at 1,250MSL, a 2,000 foot tow puts you above the rule of thumb altitude for leaning the mixture, and the manufacturer and our IA recommends leaning in all conditions. You will find the engine will operate much more

efficiently being leaned, and your gas consumption will be noticeably reduced. Don't overheat, however starting to lean turning xwind is not a bad idea.

The authorized letdown procedure by the LESC Maintenance Officer has been dictated to ensure we address the issue of shock cooling the engines. You will have severely stressed the engine on the way up, so it is imperative that you do not shock cool it during your descent. The authorized procedure is:

Turn left, clear glider & reduce power just under redline  
Fly straight and level 5-10 seconds  
Clear airspace & head towards Skylark  
Reduce RPM's to 2300-2400  
Nose over, target speed just below Va (120 MPH)  
Pull 200 RPM's off every 500 feet  
Target 1700 RPM's on base leg, mixture Rich (JAWS retard  $\frac{3}{4}$ "

Throttle back only when necessary to enter the pattern or as a safety precaution.

The rule of thumb is to not cool an engine more than 60 degrees per minute. By adopting the procedure described above, you should be able to keep from over-stressing the jugs and help keep our maintenance costs down.

Remember, the three axioms of conducting a good tow are pitch attitude, pitch attitude, pitch attitude. You most likely will be at full power all the way up. Don't chase your airspeed on turbulent days. Keep some semblance of a constant pitch attitude, and your airspeed will stabilize. Be cognizant of the required tow speeds for the aircraft you're pulling up and don't do steep turns on tow!

### **TOW SCHEDULING**

Online scheduling is here! LESC currently uses tak-off.com as our scheduling engine, and you may add yourself to the schedule at any time. Please see the webmaster if you haven't been given a logon and password. As part of the tow staff, you are expected to pull one shift a month as a minimum commitment. We cannot and will not carry pilot's on the roster who do not support the club. We're sorry, but we need pilot's who will commit to supporting the operation and will fly according to SOP's.

### **CANCELLATION POLICY**

Stuff happens. If you need to cancel with more than a week's notice simply go online and erase your entry. If it's within a week, please also follow that procedure plus drop the CTP a voice mail or email informing that you did indeed have to cancel. **If it's within 24 hours of your scheduled date**, please a). Find someone to replace you. b). Drop the CTP a voice mail and c). Leave a message on the clubhouse answering machine that you've had to cancel and whom you have covering for you. Within 24 hours it is your responsibility to find your replacement.

You will be provided periodically with an updated roster of tow pilots to ensure that when events do occur that LESC can continue operations. It is of vital importance that tow pilots show up when scheduled and be on time. If we are suffering inclement weather, please bear in mind many times Elsinore has totally different conditions than where you are located. Please plan on meeting your commitment unless you have contacted the duty office personnel or duty CFG and they have cancelled operations for the day.

## **TRAFFIC CONSIDERATIONS & COMMUNICATIONS**

LESC operates in a high volume traffic area. It is imperative that you follow radio procedures as described in the SOP's. The information presented here is a summary of the SOP, and in no way should substitute for you reading and acknowledging having read the SOP's. The SOP information is subject to change from time to time, so in all cases the SOP will supercede the information contained herein.

You should always be on the local UNICOM frequency, 122.9 upon launch and recovery, and for normal operations. There may be times when you have pre-arranged with the glider on tow to change to 123.5 or 123.3, but unless otherwise indicated at all times should you be monitoring 122.9.

Announce your impending departure on 122.9 when the glider has signaled you their readiness and you and the line person have cleared the pattern.

Always communicate with the other tow plane in operation to ensure non conflicting patterns. It is ok to wait for the other tow plane to recover, or you may mutually arrange for the other tow plane to wait for your launch. This requires close cooperation between the respective tow pilots, so in no case are you to assume the other pilot has heard and acknowledged you. Always err on the side of safety.

Jump planes occasionally will usurp your runway. They own the master lease on the airport. Report any unsafe actions to the Safety Officer, and always attempt to keep civil relations with the Jump pilots.

A federal airway bisects our local airspace. As such, there is a plethora of power traffic, not necessarily looking out for you. There are also obviously multiple skydivers coming from many directions, and hang glider and para glider traffic to contend with as well. Keep your head on a swivel and ears on 122.9.

Announce your base leg, announce your final only if necessary. We need to keep radio traffic to a minimum. It is not necessary to call down to the office with the release altitude of the glider as you will have recorded that on your log.

## **PRE-FLIGHT, FUELING AND SECURING**

What pilot would fly without a proper pre-flight? Pre-flight the aircraft before the first flight of the day. Keep 9 quarts of oil in the engine. Any more just gets blown out. Check the oil during every refueling. Contact maintenance if excessive oil consumption is observed, and always record your fuel and oil on the tow log. Conduct one SHORT warm up flight if you're the first flight before towing. Extended warmup flights will result in your immediate grounding. We're not here to build your time, but to provide a service to the membership. Let's keep the tach time down on the engines and not waste fuel as well. Test your release when the line personnel hook you up for the first time.

Re-fuel and top off the oil before securing the aircraft. If you are the last flight of the day and no one has relieved you, it is your responsibility to properly secure the aircraft.

Conduct a briefing with the duty CFG before your first launch to ensure everyone is on the same page. You will become accustomed to the hand signals given by the glider pilots regarding altitude, direction and special requests on tow (such as a line break or wave off for training purposes, or to box the wake).

Do not rely on the gas gauges. Let's repeat that. Do not rely on the gas gauges. They can be grossly inaccurate. You must know that you have appropriate fuel on board before launching. Discuss fuel requirements and management with the CTP.

## **RUNUP**

After starting, do not runup on the concrete pad any longer. Taxi out past the fuel pump and position yourself so your dust does not cause a problem. Refer to the Callair manual and checklist for further information regarding the run-up.

## **TOW OPERATIONS**

It is your responsibility to know where the drop zone is and avoid it. Always cooperate with the jump operation pilots. Also be a good neighbor and refrain from passing low overhead housing areas, and keep the noise to a minimum. Consult the SOP's and duty CFGI for appropriate patterns and tow routes. We have established specific departure and recovery routes, which must be adhered to when we're conducting two towplane operations. Under no circumstances are you to fly within the DZ, over Rome Hill or over the bird sanctuary unless there is an emergency. We are extremely limited by our landlord where we can and cannot fly, and also have to be cognizant of noise concerns. Everyone makes a mistake now and then, however repeated violations will result in your being invited to fly elsewhere. We will not survive without each tow pilot being respectful of the limitations placed upon us.

A word of advice, don't fly too close to the ridge. We have had instances wherein the glider turned before verifying release which subsequently pulled the tug's nose down towards the ridge. It was reported by the tow pilot that in both cases the tension was such that it made it impossible to effect a release. So in all cases use good sense when operating above and around the ridge line. Don't tow students close to the ridge. Know the capabilities of the pilot on the other end of the string.

Never take a glider beyond it's final glide range back to Skylark without expressly discussing this with the glider pilot beforehand. Be exceptionally careful how far out over the lake you go before you turn, especially on days you're launching with a tailwind.

Always ensure proper coordinated activities with the line personnel and glider pilots. You are responsible for knowing and understanding all visual signals. Know and respond to them. We are also fortunate to have radio procedures in place, however UNICOM is busy so keep radio traffic to what is absolutely necessary.

As a ***SAFETY PRECAUTION*** be extremely careful when stretching out the line. After you visually verify the tow pass color and # (and document it), you may begin to stretch out up to the cone on your left wingtip. This will allow the line personnel to retrieve the string and attach it. **DO NOT PROCEED UNTIL SIGNALLED FURTHER**, nor if any personnel are standing by the cockpit or in front of the wing. In no case are you to proceed anywhere close to stretching the line taught unless the wing runner is next to (not in front of) the wing and signaling you to proceed, and there are no other personnel standing in front of the path of the glider.

Our usual procedure when we're busy is to stop while making your turn around the mushroom and record the next tow pass. If they're reasonably ready to go, you may taxi out with your wingtip adjacent to the cone on your left. Under no circumstances are you to stretch the line taught, even if being signaled to do so, if there are personnel standing anywhere in front of or in the vicinity of the glider. This point has been made twice for emphasis.

Lake Elsinore, Skylark Field experiences some of the most diverse weather patterns in Southern California. During winter months, we have outstanding ridge and wave conditions due to Santa

Ana conditions, and in the summer awesome thermal activity. It is your responsibility to know and understand how to deal with differing conditions. This knowledge will come to you as your experience level progresses as a tow pilot.

Remember, your job is to provide a service to the glider pilot. Please adhere to their requests as long as they are within safety guidelines and LESC policy. You however are ultimately responsible for the safety of the tow. If conditions warrant that you decide you do not fly, your decision will be supported 100%. Everyone has personal minimums. Yours will be respected. The Safety Officer or duty CFIG (acting Safety Officer in the SO's absence) will make the ultimate decision to shut operations down. Once that occurs, you cannot fly even if you think you can safely. They are ultimately in charge of safety.

Any questions? Please don't hesitate to ask. The only dumb questions are the ones you don't ask.

Fly safe, fly often! For those of you tow pilots not glider rated, here's your opportunity to add a rating. Get on the instruction schedule!