

# SCHLEICHER SAILPLANES, INC.



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## Newsletter #2

Modifications: If you find ventilation inadequate a big improvement can be made by putting 1" holes in the air ducts below the canopy sill, gluing in 1" plastic pipe and then placing a 45 degree elbow on that to direct the airflow. Holes should be placed toward top of channel to avoid damaging rudder cables which run in the channels. This mod was invented by John Seymour and Roy McMaster.

Battery location: 6V Sales (Ken Hornbrook) makes a nifty battery box for the -20 which mounts over the mixer.

Wheel brakes: I have kits which put the brake on the speed brake handle. Cost: \$42.00

A very comfortable stick grip in the form of a contoured ski pole grip can be mounted on the stick. The diameter of the ski pole is a good bit smaller than the stick but it will go on if it is warmed in boiling water. This idea was Jim Trotter's. Roy McMaster had trouble with Komet axle mounting failure. He welded in two new stiffeners to solve the problem. If you have an older Komet with as many miles as Roy's (many) crawl under and see if everything is solid. Call Roy for details. On the subject of Komets it's not a bad idea to install some more positive down locks. Most damage to the gliders and Komets at last year's Chester tornado was due to Komets popping open and then blowing over. One system is to drill a hole through the channel and sill where they overlap in the rear and put a bolt or pip pin through. The stock locking pins are not sufficient because just a little distortion unlocks the top. 

Operations: Landing gear mechanisms: A landing gear was damaged recently because the mechanism wasn't over center properly. One way to tell is to observe how much effort it takes to get it into the down position. You should have to use a little muscle to get it around the corner and into the detent. This ensures that the handle and actuating rods are pulling the mechanism into an over-center configuration. If your handle is loose and floppy in the detent fix it. This is done by removing the seat pan and shortening the actuating rod.

Landing gear operation: With time the gear will get more difficult to operate. It requires continuous attention (once or twice a year) to keep it operating like new. The trouble spot is where the handle slides on a fixed rod by your left hip. You can stick a goose neck

oil can in the slot and drip oil on the rod while actuating the gear up and down (while suspended on the dolly please!). Better yet, and in cases where the rod and bushings have become galled, remove the seat pan, clean and polish the rod and then lubricate. 2

Tow release adjustment: While on tow a -19 made a premature release, luckily at a non-critical point. This was because there was not enough slack in the release cable and it was right on the verge of release at all times. To check yours see that the yellow knob has a slight droop to it and doesn't seem to be pulled tight against the panel. In addition listen for a distinct metallic "clack" down behind your butt when the knob is released. To get more slack trim away some of the plastic tubing on the cable at the knob. Another check is to notice how far you pull the knob during a release check before the rope puller falls on his ass. If you barely move the knob before the rope comes out check it before flight.

Tight tape: A -20 almost crashed on an air tow because the elevator gap had been taped a few months earlier and the plastic tape had shrunk considerably. The factory tape will also shrink a little and this has led to ASW-20 restricted aileron travel in flap #1. By design the ailerons are restricted to  $\frac{1}{2}$  travel in #1 but in a couple cases there was almost no travel in #1. In another case a -20 owner thought his flaps were jammed down because the sticky side of the tape had glued itself together in the trailer. In any event always make a control check before flight which includes full travel. Also in the category of "tape" is this advise: Do not tape the front canopy gap - you probably won't be able to jettison the canopy. Some pilots were doing this at Hobbs; naughty, naughty.

Push to talk buttons: The factory has experienced a rash of failures with the buttons. You might want to replace it as a precaution or at least be aware that it might stick on some day. It is easy to replace but you will need to cut off the grip because it is glued on. Get a new one from me or try the ski pole grip mod. If you install a new button get one that has a healthy return spring so that you don't accidentally transmit every time you lay your map on the stick.

Spoilers: In the long run it is better for the spoiler fit to keep the spoilers unlocked in the trailer or hangar. But make sure you have a way of keeping them almost closed so they don't get bashed on the side of the trailer.

Water ballast: A -20 wing got wrecked because the crew/pilot were in a hurry and hooked up a hose to the glider. 60 psi is of course too much but so is the head of pressure you get from the top of a van. If your water source is more than 3 feet above the wings incorporate a T with a tube that goes no higher than 3 feet above the wings. The vents, if you have them, are not able to relieve pressure fast enough to avoid filling over-pressure. They are designed for slower pressure changes like those encountered in flying. If there is a chance that crews unfamiliar with proper filling precautions will work on your ship put a placard in there warning of potential damage.

19 Elevator Flutter: While going through the start gate at Hobbs a -19 experienced severe elevator flutter. The pilot later calculated his TAS to be 190 to 200 MPH. Later examination of the ship showed the rear control stick bulkhead to be broken loose on one side. (This bulkhead is located under your knees.) This allows way too much slop in the system. Remember that redline should never be exceeded in smooth air and the yellow range must be avoided in rough air. A fatal -19 crash currently under investigation bears similarities and although it is just conjecture a few words at this time concerning maintenance of your bird are in order.

Any time you make a gear-up landing, smash the gear off, bash in the nose of your bird or in any way traumatize the nose, remove the seat pan and see what things look like in there. Check for damage to the controls or looseness that might have occurred in the incident. This may also sound elementary but any time you get a cockpit full of water, for whatever reason, pull out the seat pan and dry the ship out.

I will keep everyone informed of any developments that might affect your ship. From what I've seen there is nothing to call the airworthiness of the bird into question.

Speaking of airworthiness we are all probably a little too trusting in making sure our ships are safe. Of course we get an annual inspection, etc. but in reality how much does the average inspector know about fiberglass or gliders? Does he take out the seat pan or know about the correct adjustment of the Tost release? I'll bet the majority don't. So it really boils down to being aware that you are the one responsible because it is your neck.

15AD: Speaking of responsibility of Big Brother (or lack of it) the FAA in OK City has refused to publish an important ASW-15 AD because it didn't go through channels. This normally takes 6 to 10 years when dealing with Brussels so in the meantime if any of you have -15 buddies tell them to contact me. It involves a precautionary inspection of the horizontal stab actuator.

Do you know how to bail out? Following a mid-air recently a -20 pilot was killed when his chute failed to open completely. The canopy was still on the wreckage and popped off when the jettison knob was pulled. Perhaps the pilot released his lap belt first and was thrown out when the rear latches were opened. At any rate periodically go through a bailout exercise so you can do it fast. Military pilots have to accomplish an "egress training" each quarter. Glider pilots should too

Let me know if I can help you in any way. Also please pass this newsletter along to new owners or others who should see it. If you missed the mailing I probably don't have your new address.

Happy Soaring!

KS

PS Your envelopes are stapled because the newsletter had to be rewritten when it was ready to go out.