

Self-Launching Sailplane Pilot's Association

N E W S L E T T E R

NOV-DEC '88

Pete Williams, President and Editor//Jim Culp, Vice President //Issue #5, Vol.1

MEMBERSHIP CONTINUES TO GROW....

The past 45 days have seen very rapid growth in new members to a total of 85 as of this newsletter.. We attribute part of this growth to SSA publishing several news releases recently and to the growing interest in the SSA membership in self-launching sailplanes. Many of the new members are homebuilders. The experience level in flying powered aircraft remains high. We welcome all new members and request you keep information on your activities flowing into the editor for exposure to all members. We are a young and growing group and plans are underway to expand treatment of several areas including: Homebuilding, Record Attempts, Multiplace SLS Operations, Flight Safety, etc. We plan on several workshops and meetings at the next SSA Convention and will publish info on same. We also plan on a membership meeting to allocate specific responsibilities according to expertise in certain areas. As I said in the beginning, this organization will only be as effective as its membership desires. We now have several of the sailplane and engine manufacturers on board and can now speak as one unified voice concerning mutual concerns. Thank you for assisting me in keeping the inertia steady and rolling forward.

NEW ROSTER ENCLOSED..CHECK IT OUT!

In the new roster, you will note the order is by zip code to assist you in finding out nearby members. Also note the type of SLS or activity. At the conclusion, you will find a listing of service and maintenance organizations. Please advise errors and address changes.

ENGINE/AIRCRAFT APPLICATIONS..

In the last issue, Maintenance and Parts Manuals are available for the Rotax Line. The following is a list of various engine models and the sailplanes they are used in. The engine manufacturers are listed in the Roster, should you need more info.

Aircraft	Engine	HP	Wt.
PIK20E	Rotax 501	43	74#
DG-400	Rotax 505	43	76#
PIK30	Rotax 505	43	76#
ASW-22	Rotax 505A	43	76#
Janus CM	Rotax 535	60	83#
Nimbus3DM	Rotax 535C	60	83#
DG-500	Rotax 535C	60	83#
ASW-24E	Rotax 277	25	N/A
VentusCM	SOLO 2350 B	25-27	70#

Note: All weights are bare engine except SOLO. (i.e. no prop or ext/retract system).

DG-400 REAR BAY ENGINE/PROP HATCH DOOR...

Have you had problems with this door not closing, either in flight or on the ground? Curtis Erwin from Texas says his hangs up at the vertical position and will not always close in flight. Both the gas strut and the bungee are suspect. If you can help, please call him. Curtis also reports his "folding gear" problem was solved with a new gas strut and tightening the "down" snubber on the gear handle. Joe Stuart says he has had some problems with the propellor not being accurately aligned in the bay at full retraction. He was unable to extract the engine due to the prop position safety overrides and found upon landing that the aft tip of the prop was positioned under the "lip" of the fuselage curvature. The engine would not extract. He has accomplished a "fix" using a sheet metal box at the end of the bay to prevent the prop from rotating, but suspects that if the stopping position of the prop is at compression, this problem would not occur. My experience has been to hold the prop brake firmly on all of the way to complete retraction and the same upon extraction. Stuart suggests that the factory consider installing a propeller tip positioning "box" at the last 2-3" rearmost position that will prevent prop rotation in the amount that triggers the relay.

MOTORGLIDER RECORDS CLAIMED...

500KM Triangular Cs. 74.86mph-Don Aitken
Straight Dist. 490.15sm-Don Hurd
500KM O/R 84.6mph-Don Hurd
The "SUN" group again in a DG-400M/17-Minden Area

MAGNETO BOX PROBLEMS....

One failure reported. When checking mags, the engine quit on #2 but ran well on #1. Examination of mags showed all wires secure. Consulted Rotax 505 Repair Manual and discovered methods to use in isolation of problem. Sometimes this can be coil failure (behind flywheel). Trial and error using a standby mag solved the problem. Mag that failed showed no external defects. It cannot be repaired due to potting compound. Dyer-Bennet advises to be very careful when reinstalling flywheel as bolts can protrude and damage the coils. He also suggests removing the prop support to remove a failed starter. As a matter of interest, the mag that failed was the one closest to the engine and mostly likely the hottest one. Total hours on the mag was 45.

FACTORY REPORTS...



Bombardier-Rotax:

In a letter dated 10 Aug. '88, Rotax advises the "reason for isolated cases of piston pin bearing failure is internal overheating caused by a lean mixture or inadequate oil quality both causing a breakdown of proper lubrication." They advise they are working on an improved solution and will issue a Technical Bulletin. As pilots, we can make sure the carb. mixtures are properly set and use the factory-approved fuel/oil mixture. Watch the cylinder head temp like a hawk right after liftoff and keep your fuel system "squeaky" clean by changing the on board filter often and filtering when filling the tank..

ENGINE BAY FUEL COCK INSPECTION..

This is a Gotz product and should align with the fuel lines with a snap. Mine did not and would never completely snap on. I discovered the reason to be that the cock red handle was striking the securing bolt that holds the valve firm to the airframe's bottom. The reason was the cock was installed at an angle. There was a T.N. on this to remove and replace with an updated valve, so check your installation for integrity. The only way you can reach this area is with the engine extended and the forward bay doors loose.

AILERON THROW CHECKS...DG-400

If you think there is a problem with aileron displacements, you can accurately check them by using the the template shown in Diagram 4 in the Maint. part of the handbook.. Photocopy this page and mount on light cardbaord. Cut out as indicated and measure throw by slipping template between flap/ail.juncture.

PIK-20E OPERATIONAL INFO..

Felix Chardon (Roster) asks several questions regarding engine problems: Starter failed to energize on an air start and had to perform windmill start. He wants to know the location of the starter relay. He is also getting oil spatters at the rear of the prop hub bearing and asks if this is normal and what type and weight of prop bearing lube should be used. He has made a grease plate per Service Ltr. H-20E-3 and can make another if anyone needs one. Felix also reports loss of power on climbout after shutting off boost pump. He found a very dirty fuel filter to be the problem and recommends running the engine dry and draining the fuel tank prior to winter storage.

INTERESTING SELF-LAUNCHERS..

Gene Clements reports there is a kit SLS available called the J-5 MARCO. This kit was designed by Polish designer J. Janowski and consists of premolded fiberglass parts plus metal structures. It spans 26.5' with a gross of 640# (Empty weight-352#), cruises at 105 mph. In the glider mode it has an L/D of 16:1. The basic configuration is a V-Tail, retractable gear, and flaperons. It is powered by a KFM engine with 25 hp. For more info call Andy Kaweck at 312-394-8089.

Fred Calhoun of Rolling Hills ,CA flies a Porsche Engine-powered 2-place HOBBYLINER. This 53' spread craft is a pusher with 65hp that weighs 1,600# at takeoff and cruises at 93Kts. It climbs a respectable 750fpm after a takeoff run of 525' and can carry a payload of 440#. The 3-bladed prop feathers to provide an L/D of 24/1. Fred operates out of Torrance Muni. The HB-23 HOBBYLINER is made in Austria.

FAA TYPE CERTIFICATION OF SAILPLANES IMPORTED AS EXPERIMENTAL..

This is not as difficult as may be expected but requires some effort. Once the foreign manufacturer has completed all tasks necessary and a type certificate specification has been issued by the FAA, the owner must complete an Application For Airworthiness Certificate (FAA Form 8130-6) and submit same to the local FAA Office. The local FAA official will inspect the aircraft and logbooks and issue an Experimental Special Airworthiness Certificate to "Show Compliance" with FARs. This special certificate will require some flight hours to be logged and a Statement of Conformity (FAA Form 8130-9) to be completed. FAA will also supply the pilot with a Type Certificate Data Sheet showing all of conditions and limitations to be met for airworthiness. If the aircraft meets all of these criteria, a Type Certificate will be issued.

SUGGESTED 10 FLIGHT ORIENTATION FOR SELF-LAUNCHING SAILPLANE

The purpose of these flights is to become completely familiar with the various modes of operating and flying this motorized sailplane. Complete study of the pilots operating manual is necessary prior to beginning these flights as well as developing and using written cockpit check lists. All flights use full fuselage fuel and no water ballast. All flights except 1&2 without wing runner.

Flt.#	Activity	Clb. Time	Fuel Used	Air St.	Alt. Loss	CHT Max
1.	Normal tow in 15M mode. Slow flight, stalls, minimum sink, Vne. At best L/D cycle to all flap positions including spoilers full out. Land.					
2.	Normal tow in 17M mode. Complete all Flight 1 checks. Land.					
3.	Review engine failure on T/O. Self-launch in 15M mode. Climb to 5M agl and stow engine. Land with engine stowed.					
4.	Self-launch in 17M mode. Complete all Flight 4 checks. Land with engine stowed.					
5.	Self-launch in 15M mode and climb to 5M agl & stow engine. At 4M extend engine and restart. Climb to 5M and stow engine. Land with engine stowed.					
6.	Self-launch in 17M mode. Complete all Flight 5 checks. Land with engine stowed.					
7.	Self-launch in 15M mode. Climb to 5M agl. & stow engine. Extend and restart engine at 2.5M agl. Land with engine running and taxi in.					
8.	Self-launch in 17M mode and repeat Flight 7.					
9.	Self-launch in 15M mode. Climb to 5M agl and stow engine. At 2.5M extend engine and land with engine extended and off.					
10.	Self-launch in 17M mode. Repeat Flight 9.					

Things to shoot for during the orientation flights:

1. A smooth and repeatable pre-flight check list.
2. A dependable initial start sequence. Use of the throttle and choke are critical upon initial start.
3. Can all engine switches be easily reached? Are all engine indicators working properly? Can you pass a blind-fold check on the name and position and function of all engine indicators and switches?
4. Are elevator trim and wing flap positions providing the measure of pitch and roll response you need to lift the wing on take-off roll and rotate for lift-off?
5. Are the engine RPMs kept within limits during both roll, lift-off and climb?
6. Have you discovered the "rough" RPM areas where vibration is excessive?
7. Have you mastered the prop brake to position the prop properly for retraction. Be sure and KEEP the prop brake on until retraction is complete. Also remember at airspeeds of over 49 KIAS, the prop will tend to windmill upon extension of the engine. Again, use the prop brake when extending to preclude engine door and prop damage.
8. Have you discovered the proper amount of choke when air starting a "warm" vs a "cold" engine?
9. Are you staying close aboard the departure field on takeoff and mentally simulating a malfunctioning or dead engine after takeoff?
10. Have you practiced the recommended cross-wind takeoff routine?
11. How much fuel is consumed on a normal launch?
12. Are you prepared for an engine fire during ground start? Air start?
13. Have you simulated extending or retracting the engine using the emergency by-pass system, if installed?
14. Have you listed the steps for bail out in an engine extended and running situation?
15. Have you planned and flown a "saw-tooth" ferry flight?
16. Do you check fuel filters and cocks before each flight including draining a fuel sample from the sump?
17. Are both the throttle and choke linkages checked free and operable before each flight?
18. Do you time the engine extension cycle prior to each flight?
20. Have you prepared a cockpit/external Check List for all situations?

NAME _____

SAILPLANE _____

DATES OF FLIGHTS _____

COMMENTS _____

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Self-Launching Sailplane Pilot's Association

The SLSPA is a national organization founded to encourage the design, development, production and safe use of self-launching retractable engine sailplanes to advance the art of soaring by promoting:

- *Participation in National and Regional Auxiliary Powered Sailplane Championships.
- *Mutual exchange of safe flying procedures, servicing, repair and maintenance procedures.
- *The establishment of Soaring Records.
- *The development of friendly relations between both U. S. pilots and foreign pilots who fly self-launching sailplanes.

If you desire more information on joining this forum of pilots, write SLSPA c/o Pete Williams 10251 N. 56th Dr. Glendale, AZ 85302