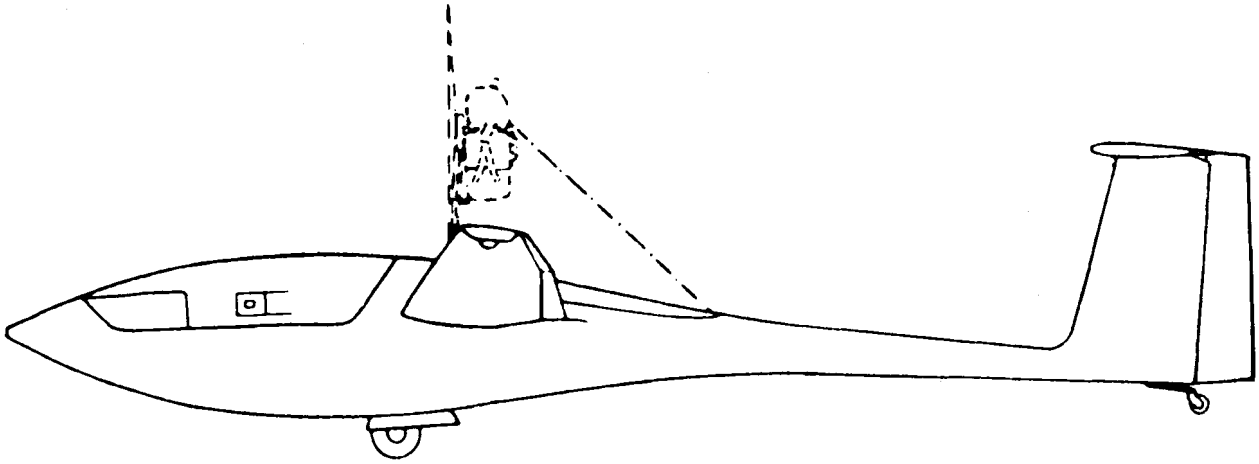
Siren PIK 30 Self-Launching Sailplane



Designed and produced originally as the 15 meter PIK-20E in Finland by EIRI KY, the PIK-30 version has 17 meter tip extensions and is produced by SIREN, located in Cadex, France. The 20E has a single ignition Rotax 501. The 30 has a dual ignition 505. Both engines produce 43 hp under standard conditions. The 17-meter version has a max. gross weight of 1,014 lbs and an L/D of 45:1 at 68 mph. with +4 flaps the takeoff roll (no wind, concrete, sea level, standard day) is 823' with 1,968' required to clear a 50 ft. obstacle. Rate of climb is 600 fpm. L/D is reduced to 16.5/1 with engine extended. Operation of the engine extension/retraction system is manual. Seventeen SLSPA members own and fly PIK-20E/30s.

Self-Launching Sailplane Pilot's Assn.

NEWSLETTER

MARCH ~ APRIL 1993

Published Bi-Monthly by SLSPA, Inc • Pete Williams, President and Editor • Bruce Templeton, Vice President • Issue #31 Vol. V

1993 SSA/SLSPA Convention Highlights...

There were over 85 attendees at the Motorglider Breakfast including Wilhelm Dirks and Reiner Stemme. Dr. Stemme gave a talk on the development of the Stemme S10.

SLSPA Membership and Board Meeting:

Board of Directors	Pete Williams	Chairman
	Bruce Templeton	Member
	Jerry Wenger	Member
	Stan Nelson	Member
	Don Hurd	New Member

Accepted Jim Culp's resignation as Board member and Secretary. Jim was one of the founders of SLSPA and we thank him for his help and services since 1988.

Officers	President	Pete Williams
	V.P. & Secy.	Bruce Templeton
	Treasurer	Steele Lipe
	Safety	Stan Nelson

Established by corporate Resolution the SLSPA Competition Rules Committee:

Bud Schurmeier-Chairman
Don Pollard
Rick Howell
Stan Nelson
Tupper Robinson

This committee is charged with working with the SSA Competition Rules committee to develop rules and procedures that permit motorized sailplanes to compete in the F.A.I. Class Regional and Sports Class National Soaring Championship events. The committee will also continue the development and publish the rules for U.S. National Auxiliary Powered Sailplane Soaring Championship Class events.

Any rule changes, suggestions and recommendations regarding the competitive events should be addressed to this committee. The deadline for comments for the 1994 season's rules is August 1, 1993. Rules for the 1993 F.A.I. Regional Class season require pilots who desire to compete advise the C.D. one week in advance of the contest as to the type of motorglider, the method he will use to show engine run time after passing through the Start Gate. All motorgliders will be required to take a tow in 1993 and will be scored to the last valid turnpoint if the engine is used while on the task. The 1993 SSA Competition Rules will contain details and an Annex covering motorglider entry at F.A.I. Regionals and the Sports Class Nationals.

continued to page 2

Convention Highlights...
continued from front

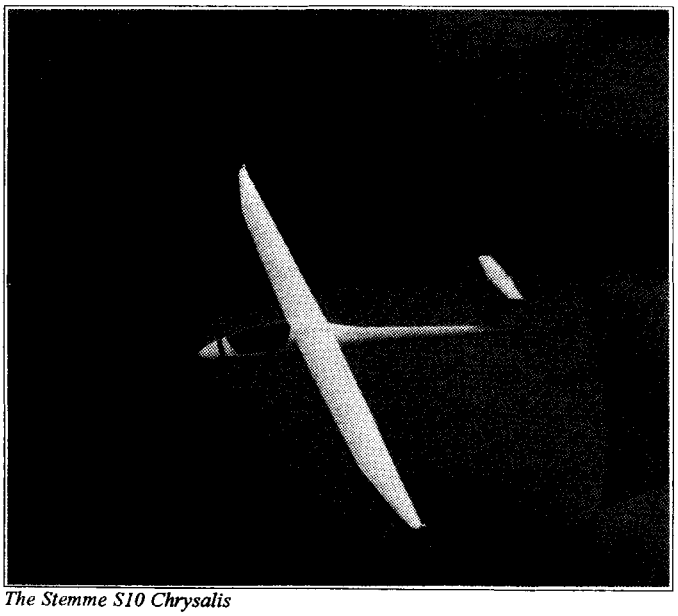
Motorglider Experts Panel Discussion...

This was well attended with talks by Moderator Stan Nelson, Tom Knauff, Wilhelm Dirks and John Murray. Items of interest included the DG-800 and the new ASH 26E. Murray advised the engine being tested for the 26E was a U.K.-produced watercooled Norton Wankel that remains in the engine bay with a large propeller and radiator exposed to the slipstream during engine operation. Horsepower output yet to be announced.

Ed. Note: Higher H.P. engines are being fitted to the new 18 meter self-launchers and the trend toward a "hidden" or semi-extracted powerplant seems to be norm. SLSPA learned that Rollanden-Schneider is now developing a new 18-meter LS-6cM Self-launcher that will be Rotax powered. Production is expected in the Spring of 1994. Self-launchers are now being produced by ALL sailplane factories in Germany.

The Stemme S10 Chrysalis...

This unique 23 meter span self-launcher was the centerpiece of the exhibition floor at the convention. The Stemme/USA crew was highly visible with their red and blue jogging togs. Video coverage of the ship and its features played almost nonstop while the St. Louis-based crew and Dr. Reiner Stemme provided detailed information on all of the S10 systems. Cockpit instrumentation was extensive including a Garmin GPS system with Argus moving map display. Barbara Pfifferling, President of Stemme USA announced that the first U.S. delivery of an S10 will be in May 1993 to a Dallas, Texas group. Over 50 S10s have been delivered worldwide.



The Stemme S10 Chrysalis

Schempp-Hirth Elevator Push Rod Tech Note:

Tom Knauff, S/H USA Dealer advises this Tech Note applies to ALL Schempp-Hirth sailplanes with a "T" Tail and requires an inspection for corrosion at the base of the push rod. Knauff suggests replacing the rod ($130 + 2 hrs labor). To order the part or obtain a copy of the T.N., contact Knauff & Grove, Inc. 814-355-2483

'93 SSA Convention Talk by Dirks...

According to Wilhelm Dirks, VP and Chief Engineer of Glaser-Dirks, Rotax will continue production of Rotax engine models 275, 505 and 535 for motorgliders in production. Bob Marshall, the U.S. distributor for Rotax has advised that engine sales to individuals other than OEMs, will cease by the end of May 1993 and all such orders will be filled by the end of 1994.

A new Rotax engine is currently under certification by Rotax called the 463. It is watercooled, has single ignition, a single carburetor and produces 48hp. Dirks believes the 463 to not be a totally suitable replacement for the 505 due to complexity, weight and cost and stated he believes the 505 will be in production to the year 2000 to satisfy sailplane production demands. The new DG-800 will have the aircooled 505 for power along with a Ducati ignition system. It will also have a sound attenuation shroud with intake mufflers plus a new propeller, Mikuni carbs and an automatic engine extraction-retraction system. The 800 is an all-new design including the wings, fuselage and tail surfaces. According to Dirks, the wing's new profile was computer designed and has improved low speed thermalling as well as excellent high speed characteristics ... all confirmed by wind tunnel tests. Five DG-800s are expected to be delivered to the U. S. in 1993.

Rotax 505 Engine Overhaul Update...

Dirks also advised that the 6-year or 300 hr. overhaul requirement has always been valid for the 275 and 535 engines. Suspected corrosion of lower crank bearings is the reason due to the short run times and winter inactivity of the average sailplane installed engine. He estimated a cost of between 3-4,000 DM to accomplish the job.

Dirks also urged all Rotax engine owners who do not operate the engine for 2 months or more to properly preserve the engine by following the instructions in the engine operators manual. That is, run the engine till warm and while idling inject 20cc of conservation oil (type as specified in the manual) into the carbs then stop the engine and tape shut the carb intakes and the exhaust outlet. This procedure will assist in guarding against lower bearing corrosion and "pickle" the engine for the idle season.

Update ... continued

Rotax Tech. Bull. 505-07 covering the overhaul is not yet published. Below is a digest of FAX rec'd from Rotax dated Feb. 25, 1993 and *updated by FAX of March 10, 1993.*

1. 275 and 535 engines: O/H required after 300hrs or 6yrs.

2. 501 engines: Ser# V501/989 and V501/990 and
   Ser# 3189501 up to 3189597 .....O/H required in 1993.

3. 505 & 505A engines:
   Ser# V505/1127 & 3.308.501 to 3.308.518 &
   3.332.507 to 3.332.580 .....O/H required in 1993
   Ser# 3.332.581 to 3.332.680 .....O/H required in 1994
   Ser# 3.332.681 to 3.332.790 .....O/H required in 1995
   Ser# 3.332.791 to 3.332.850 .....O/H required in 1996
   Ser# 3.332.881 to 3.332.907 .....O/H required in 1998
   All Rotax engines higher than Ser# 3.332.907 will require an overhaul at 300hrs or 6yrs whichever occurs first.

4. Factory experience on rebuild of engines has found corrosion on critical parts of crankshaft for engines with low operating hours and in excess of 6 years time in service.

5. Rotax will authorize two or more U.S. O/H service centers to provide for overhaul services in the near future. A dyno or Master Propeller run in will be required after O/H.

6. Ultralites and homebuilts using Rotax engines are not affected by the Tech. Bull. as they have traditionally exceeded the 300hr TBO prior to 6 years service.

Ed. Note: Rotax Tech. Bull. 505/07 will contain all of the details and most likely the serial numbers involved and the authorized service centers in the U. S. and Canada. I estimate the new Tech Bull to be out by late Spring 93. If you have specific questions, please address them to the factory in Austria.

Discus M Report...

Karl Abhau reports from Germany that the self-launching Discus M has a Rotax 463 watercooled engine producing 48 hp at 6,000 rpm. The carbonfibre propeller from Technoflug has a 5' diameter. Karl reports a climb rate of 790 fpm.

Rotax Engine Ignition System Troubleshooting...

If engine ignition system check shows no RPM drop on one circuit and the engines fails to continue running on the other circuit, there are several tests that can isolate the problem:

1. Switch ignition box plugs, if the problem moves to the opposite circuit, an ignition box is defective.

2. If, after switching plugs on the ignition boxes, the problem still remains on the same circuit, there are these possibilities:

a. Trigger coil defective. Check the resistance to the trigger coils per Maintenance Manual and Engine Repair Manual.

b. If trigger coil resistance is ok, then check the circuit test switch (cockpit) to determine if it is defective. This is done by measuring resistance at the plugs that connect each individual ignition box to the cockpit test switch. The ignition box plugs should be disconnected during these tests. Make these tests by operating the cockpit test switch while grounding the wire to each the test switch to the engine block. Conduct this test on each circuit separately. A value of less than one ohm indicates the box is grounded or not in the circuit and allows the engine to operate on one plug for each cylinder.

c. If the test circuit checks ok but the engine still will not run when the one circuit is selected then a short (grounding of an exposed portion of the wire) is the final alternative possible.

This short can be intermittent due to engine vibration. With the engine off, conduct the resistance test as before while moving the wire being tested. [This was found to be true by one pilot who discovered one circuit's wire insulation was chafed through to expose bare wire. Due to vibrations caused by the engine running, this bare portion of the wire was contacting the metal shield containing the wire bundle that runs from the ignition boxes to the coils and forward to the cockpit test circuit switch.]

Owner/Pilot's Questionnaire...

If your newsletter contains a green questionnaire, *please* complete it and return in the postpaid envelope provided.

Self-Launch Pre-Takeoff Checks...

This is the "missing checklist" for most of us. Having already completed pre-flight and engine checks, you are ready to get airborne. After a quick check of flap position and a look down the runway, you add power and wait for rotation speed. So what have you missed?

1. Have you used all of the runway available? Doing so will give an extra margin of time to safely abort if necessary. IF RUNWAY LENGTH OR POWER OUTPUT OF ENGINES IS MARGINAL-*DO NOT SELF LAUNCH.*
2. Delay takeoff until you know the positions of aircraft and sailplanes in the traffic pattern. Especially those on final. If possible, make a clearing turn to check all quadrants.
3. Have you announced your departure on the radio?
4. Are you positive what the cross wind is, if any, and what control forces can be expected as speed increases? Positioning the sailplane on the downwind side of the cross wind component will provide room to maneuver in case of weather cocking. IF UNSURE OF CONTROLLABILITY DUE TO EXCESSIVE CROSSWIND-*DO NOT ATTEMPT SELF-LAUNCH.*
5. Are the wing tips clear of runway lights and Will they remain clear if weather cocking occurs. If using a narrow runway, are there uncut weeds at the edge of the runway ahead? IF IN DOUBT, *DO NOT SELF LAUNCH.*
6. Should the tailwheel be kept in contact with the runway for as long as possible to combat a cross wind?
7. Is the engine developing full takeoff rpms? IF NOT, *ABORT.*
8. Is the spoiler handle locked in the down detent? If acceleration is slow to build, check spoiler handle position and LOOK at the spoilers positions. Any slewing may indicate one spoiler is deployed. IF IN DOUBT-*ABORT.*
9. Do any stick pressures seem excessive, slack or ineffective? IF SO-*ABORT.*
10. Did you properly set and check the elevator trim prior to taking the runway?
11. Where on the takeoff run is your abort position? IF NOT AIRBORNE AT THIS POSITION-*ABORT.*
12. What is your plan for an engine failure just after liftoff? At 100' agl? Between 100' and 500' agl? At what agl altitude will you attempt a return to the field?
13. When will you raise your gear?

If engine failure does occur on takeoff, be prepared to use immediate and considerable forward stick pressure to maintain flying speed. At max. engine output a climbing speed of 49KIAS must be increased to at least 55-65KIAS to have a reserve of airspeed to safely round out and land. A recommended procedure is case of total engine failure after liftoff is:

a. Apply positive nose down stick IMMEDIATELY and check airspeed.
b. Engine Master Switch OFF.
c. Set flaps in landing position.
d. Keep wings level and select a landing spot.
e. Monitor airspeed.
f. Mild turns as necessary to miss obstacles.
g. Shoulder harness tight.
h. DO NOT TROUBLESHOOT OR TRY TO RESTART THE ENGINE.

REMEMBER YOUR GLIDE RATIO IS VERY POOR. BE PREPARED FOR THE BIRD TO LAND A LOT SHORTER THAN NORMAL. YOUR CHOICE, GEAR UP OR DOWN. MAINTAIN FLYING SPEED ALL THE WAY TO THE GROUND. *USE OF SPOILERS NOT RECOMMENDED.*

THE DECISION TO NOT TAKEOFF OR HAVING ABORTED SAFELY PRIOR TO LIFTOFF ARE TWO OF THE SMARTEST DECISIONS A PILOT CAN MAKE.

Time To Renew Your Membership...

If your Newsletter contains a yellow slip, please complete it and return with your annual dues. Thanks!