

Schempp-Hirth Discus bT Sustainer Engine Sailplane



A powered version of the contest-proven Discus 15-meter Standard Class sailplane, the bT uses a 20 hp Solo stroke engine for retrieve if unable to locate lift. The sustainer engine is extended via an drive. A self-folding 5-blade propeller is windmilled at 65kts for starting and can be stowed kts to stop the propeller. Upon engine retraction, the prop blades fold automatically. Engine of an ignition switch, fuel valve and decompression control handle. Fuel quantity is 4.2 gallons. box provides information on rpm, battery voltage and engine position. Empty weight is 606lbs. Max Gross weight is 992 lbs with a wing loading of 8.7lbs/sq.ft. Best L/D is 42:1.

Photo by Peter Selinger.

Self-Launching Sailplane Pilot's Assn. NEWSLETTER

May ~ June 1995

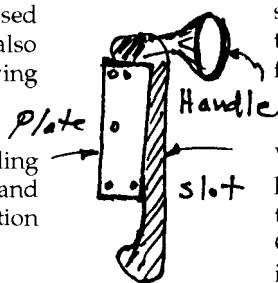
Published Bi-Monthly by SLSPA, Inc • Stan Nelson, President • Bruce Templeton, Vice President • Issue #44 Vol. VII

Inadvertent Gear Collapse in DG-400...

A few pilots have advised the landing gear collapsed during a normal touchdown. Isolated cases have also been reported with DG-202s and 300s. The following inspection is recommended:

1. To test strength of the gas strut located in the landing gear box, pull back on the main strut about 1-2 inches and release. The gear should return to the full down position (overcenter). If not, replace the gas strut.

2. In the cockpit, check to see that the gear handle is firmly pushed to the cockpit wall (left) and has no play. That is, the rubber snubbing collar is firmly against the



shank of the handle. Adjustment can be made by tightening the nut to slightly swell the rubber bushing. It should be a firm push-fit.

Rudy Allemann made all of these checks including Velcro™ to hold the handle against the cockpit wall. He still had inadvertent retraction during a normal landing. He then fabricated a fix designed by Tom Stowers of High Country Soaring. This fix involves a .20 aluminum plate that is pop riveted alongside the landing gear handle slot. It extends and narrows the detent thru which the landing gear handle passes. See diagram. Rudy reports no problems as of this writing. For more information contact Rudy Allemann at 509-375-0722 (WA).

Survey Postcard Enclosed

USA SLSPA members will find a letter from President Stan Nelson requesting input on a possible name change for the association. A postcard is enclosed for your convenience. Your input is important on this issue and I urge all members to respond promptly. Ed.

Last Chance to Renew Your Membership for 95-96!

If this newsletter (May/June 95) has a red slip in it, this is your last newsletter and you need to send your annual dues for \$20 U.S. (or \$25 International) to continue SLSPA Membership. Please send funds to SLSPA, Inc. c/o Brian Utley, 1930 S.W. 8th St., Boca Raton, FL 33486 USA.

If you have questions, please call Brian at 407-750-6876

SLSPA Board Members...

The current Board of Directors and Officers are:

Officers

Pete Williams, Chairman	President
Stan Nelson	Vice Pres./Secretary
Bruce Templeton	
Brian Utley	
Steele Lipe	Treasurer

PIK-20E Engine Extraction/ Retraction Problem...

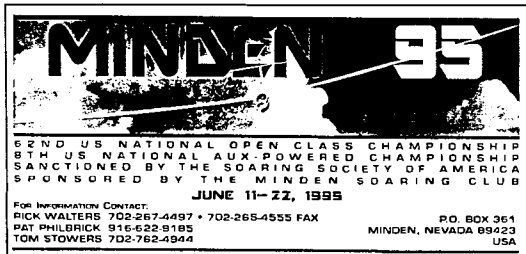
Jan/Feb Newsletter contained Chuck Rausch's account of engine support spring failure. Since that time, Chuck has replaced the gas strut in the system after finding it was leaking and compression started at 190 lbs instead of rated 230 lbs. He also found the engine mast mounting hole for the gas strut elongated which required an overlay tab weld repair. He said the force required at the cockpit crank was considerably less with a new gas strut installed. Any PIK-20E pilot desiring more information contact Chuck at 805-349-9119.

DG-400 Engine Emergency Retract/Extract Switch Failure...

DG-400, 600, 800 and 500M pilots should check the integrity of the rocker switch that is used to raise or lower the engine if the normal system fails. This emergency switch bypasses the manual switch and automatic systems to permit the engine to be raised or lowered should the normal system(s) fail. Raising the red cover to expose this rocker switch deactivates the *normal* system and provides battery power directly to the electric motor that operates the system.

One pilot reports that during an annual inspection it was found that the rocker switch would not raise the engine but would lower it. Upon examination it was found that a small spring inside the rocker switch was *cocked* in such a manner that the contacts would not close. This is Bosch part No. 343 302 003.

Suggest testing this emergency system prior to next flight and at each annual inspection.



*As of this newsletter
15 motorgliders and 17 open class
will be participating in
MINDEN '95*

Buying a Used Motorglider...

The following are guidelines for the prospective buyer and in no way are intended to be the final or conclusive inspections or conditions that must be met to assure the value or airworthiness of a used sailplane.

Every year approximately 5-7 SLSPA members purchase a used motorized sailplane. The market for a used self-launcher, sustainer or fixed engine motorglider is a narrow one and only a few ships become available each year.

Reasons for selling vary, but the main reason is a move up to a new ship. Most used ships for sale are between 7-10 years old. Some have had up to three owners but most have had two previous owners. Almost all of the used ships have been well cared for. Less than 10% of them are low time ships with less than 200 airframe and 50 hours engine time. The majority have between 200-800 airframe hours and 60-120 engine hours.

There are certain things to look for in a used ship:

1. Has there been a major repair due to an incident, accident or crash? If so, find out who repaired the ship and query him on the extent of damage repaired.
2. Has the ship been flown regularly or spent a lot of time in the trailer or hangar? If the annual airframe time is less than 50 hours per year, a very thorough inspection by a qualified repairman is suggested.
3. Are all of the Tech Notes and Bulletins incorporated? If unsure, write the factory for an updated list and compare with airframe and engine logbook entries.
4. What type of flying (competition, records, cross-country, local fun flights) was logged? Ask how many times the ship was landed out and under what conditions.
5. Has the ship been subjected to a moist or humid environment? Fiberglass, gelcoat and engine components should be carefully inspected.

It is a good idea to inspect the ship personally in company with a pilot who has experience flying that particular model along with a qualified A&P who regularly signs off annual inspections for this type of ship. During this inspection, the ship would be rigged and an engine runup made.

Pay particular attention to the following areas:

- Battery condition (Average useful life is 4-5 years)
- Condition and operation of retract/extract system
- Wheel and wheel brake condition including brake cable
- Canopy security including emergency release of canopy
- Seat belt condition
- Engine mount security
- Propeller attachment bolts security and torque
- Basic instrumentation
- Fuel system integrity (no leaks and all fuel lines secure)
- Generator/alternator output
- Fuel/oil mixture and types used
- Compression check and spark plug condition
- Steerable tailwheel linkage - No rust and freedom of movement.
- Free and full movement of all control surfaces
- Control system attachment and linkage integrity
- Propeller free of nicks and fatigue cracks
- Overall condition of gelcoat and fiberglass structure

It is a good idea to require a complete signed off annual inspection including a periodic check of the engine systems as part of the delivery routine. These inspections can be found in the airframe and engine manuals.

...continued in the July-August Newsletter

... topics covered - Prices, Resale, Listings of Used Ships and Other Considerations.

Flying Experience by Type of Motorglider

Survey Universe:

Data extracted from SLSPA Membership List • 03-12-95

Members	Type of Sailplane / Experience	Membership %
34	Fixed Engine Motorglider	12%
107	Retractable Engine Self-Launcher	38%
8	Sustainer Engine Sailplane	3%
5	Non-powered and Homebuilt	2%
116	Non Owner Pilots	41%
12	No Flight Experience	4%
282	TOTAL	100%

34 Fixed engine Motorglider Owners

(read vertically)

Hours	Sailplane	Powerplane	MG
100<	63%	4%	60%
101-500	22%	26%	36%
501-1000	15%	18%	4%
1001-1500	0	11%	0
1501>	0	41%	0

Comments: This group is primarily power pilots with limited sailplane time who fly a motorglider with a fixed tractor engine. 96% of these pilots have under 500 hours of MG time. Cross-country (usually under power) and pleasure are the main reasons these pilots own a motorglider.

115 Retractable Engine Sailplane Owners

(includes Self-Launchers & Sustainers)

(read vertically)

Hours	Sailplane	Powerplane	MG
100<	11%	22%	40%
101-500	34%	31%	45%
501-1000	25%	6%	10%
1001-1500	9%	5%	2%
1500>	21%	36%	3%

Comments: While over half of these pilots have less than 500 hours powerplane time, 36% of them have well over 1,500 power hours indicating this is a mix of pilot types with power ratings ranging from ATP to Private. Many are ex-military pilots. All are active soaring pilots with 55% having significant pure sailplane hours (in excess of 500). About twenty-five pilots (22%) are considered competitive and seek records or enter contests. The balance fly for pleasure including cross-country. It is interesting to note that only 15% have MG hours logged in excess of 500 hours. This could be due to the fact that the retractable engine MG has only been available since the early 80s.

116 Non-Powered Pilots

(read vertically)

Hours	Sailplane	Powerplane
100<	65%	27%
101-500	26%	22%
501-1000	5%	6%
1001-1500	3%	6%
1501>	1%	39%

Comments: All have some time in sailplanes and over half have significant powerplane time. All are interested in entering soaring in a self-launching sailplane. One of the significant reasons given is the freedom of launching without the necessity of a tow. Generally speaking, this group cannot be classified as purists. The primary appeal here appears to be the use of an engine to self-launch.

President's Message

To the Membership,

I was honored several months ago when I was asked to consider being nominated as President of the Self-Launching Sailplane Pilot's Association. As a member of the SLSPA for several years, I drew upon the expertise of many of the members, staff and our past president for answers to questions that I could not find answers to elsewhere.

As President, this is my opportunity to give back to this segment of soaring a contribution that will continue the positive impact that Pete Williams and the SLSPA has had on the sport for seven years. For the future, my vision includes an emphasis on operational safety and information flow.

I challenge the membership to get involved in submitting notes on interesting flights, maintenance problems, new operating locations, performance hints, etc. that we can pass on via the newsletter. Lastly, I want to thank Pete Williams, from all of us, for outstanding service as former first President of the SLSPA.

Stan Nelson
President

Wanted:

A partial built motorized sailplane kit or rebuildable motorglider. John Walking 615-675-5335 (TN)

For Sale

Grob 109A 1984 N39264 S/N 6157; Always Hangared. 265TT. 80hp Limbach with new (1993) Paddle Prop; Loran; KX155 @VOR Head; Intercom; Transponder/Mode C. \$41,500 Nick Trombetta FAX: 805-325-2303, DAYS: 805-325-2242(CA)

Grob 109B 1984, 620 TT; 90hp; 3-position prop; hangared; clean; King KX-155, KT-76A Trans-cal Mode C; Northstar Loran; David Clark Intercom, audio vario; July Annual. \$69,500. Doug Hunter 603-926-8881 (NH)

Ianus CM 1984; s/n 12; 42.5 glide ratio; 60hp Rotax 535; A/F TT-300; Eng: 40; NDH; Tinted canopy; Hydraulic brakes; Leather/Fabric interior; turbulators and seals; always covered; dual 14V batt; Engine EGT; Zander 820 computer; Ball Vario/ audio; Terra 720; 02; wing wheel and tow arm. Optional: Bose headset/Vertical compass/parachutes. Logbooks and maintenance records available. 145,000 DM Jamie Sada 52-8335-5256 60 FAX 52 8335-5265 Home: 52 8356-1800 (Mexico). U.S. mailing address: 14422 Industry Ave. Ste 7-903 ITC Park, Laredo, TX 78041

PIK-20E 125 hrs TTA; 45 hrs TTE. Excellent condition; Automatic prop stop; Full instruments @ Winter mech vario; Ball Electric Vario; Edo 720; 02; Minden trailer with one-man rigging. \$45,000 Erling Bjornrud 206-868-2025 (WA)