A Review of Two Racing Class Self-Launching Sailplanes

Schempp-Hirth Ventus cM:
This self-launching version of the CT has a 30hp Solo Engine featuring a swing-hinged prop design that folds both blades side-by-side. The result, according to S-H, is only 200 fpm sink rate with the engine extended and blades in vertical (folded) position. An electrical spindle drive extends or retracts the engine. In the model seen by the editor there were 3 batteries installed. One for the starter, one for spindle drive and one for avionics. There is no generator in the electrical system for weight saving and expected short power-on time. The 17.6 meter wing tip extensions can be removed for a 15-meter version. Maximum wing loading in 17.6 meter mode is 8.7 lb/sq.ft. (948lbs Max Gross Wt.) Sea Level climb rate is 470 fpm with a run of about 920' on a hard surface. Best L/D @56 kts is 48-49.

The cM has no steerable tailwheel or wing tip wheels as standard equipment. To permit taxi operations one owner has installed tip wheels and a full castoring tail wheel which can be removed prior to flight. Empty weight is approx. 672 lb.Finish both inside and out is excellent and a tilting instrument panel makes for easy entry/exit. Price delivered in USA is approximately $80,000 according to instrumentation. A unique solar panel system was installed into the aft engine doors. This system produces 400ma of current to the battery system. To convert to a pure sailplane, the engine can be removed (77lbs) and the maximum gross weight can be increased to 1,102 lbs in the 15-Meter version. Schempp-Hirth's stated objective is to provide a high performance sailplane independent of a tow without losing any performance.

continued on page 2.....

Self-Launching Sailplane Pilot's Assn.

NEWSLETTER

MAY-JUNE 1990

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3rd Auxiliary-Powered U.S. Nationals..
5-11 August (practice day-4 Aug) Littlefield Tx. The entry fee is $348 with tows and $200 without. Places to stay: Crescent Motel-806-385-4464 or Plains Motel 385-5724. Lubbock nearest large town. Flown with Sports Class Nationals.

Ten Contestants:
DG-400...Aitken, Clark, Macaulay, Suddard, Williams.
Ventus cM..Buck, Abhau
Ventus cT.. Stone
PIK20/30.. Howell, Schurmeier

Contest Manager: Oliver Ramsey 806-795-9169

ENGINE EXTRACTION RELAY PROBLEM DG-400
One pilot reported engine would extract only if EMERG system used, Retraction was normal. Determined that relay SCHEIR #07.3300.00, 12V 20/30 amp six-contact point relay was sticking. Relay located in electronics bay beneath right thigh. Look for 2 grey cubes about 1 cubic inch in size. A sharp blow would "unstick" the unit. Replaced defective part.

UPDATED TN. LIST FOR DG-400.....
There are 22 TNs issued for the DG-400. If you desire a copy of this list, send SASE to SLSPA.

MEMBERSHIP QUESTIONNAIRE...

Please take the time to complete the enclosed questionnaire concerning SLSPA's part in establishing contest rules and seeding for World Championships. As a soon to be division of SSA, we need membership consensus on these matters. Right now the powered sailplane class in the U.S. does not have the high visibility that other classes enjoy. It's a matter of education and each U.S. SLSPA member can assist greatly by returning the questionnaire.

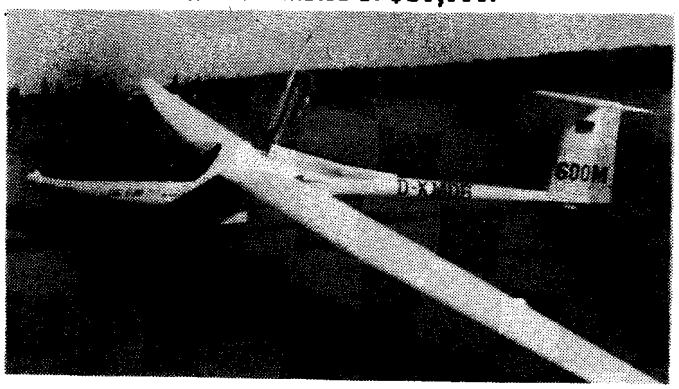
BATTERY SOURCE.....

POWERSONIC Corp. (P.O. Box 5242, 3106 Spring St. Redwood City, CA 94063 [415] 364-5001) has a very complete stock of rechargeable lead-acid gel-type batteies from 6 to 12V with ah ratings from 8-20. Prices are reasonable.

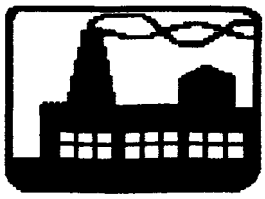
VENTUS cM ENGINE & SOLAR PANEL CONFIGURATION

Glaser Dirks DG-600M

This is the self-launching version of the DG-600 that uses a 25hp Rotax 275 2-cycle air cooled engine. It features a 3:1 reduction ratio and a large propeller. The fuselage is carbonfibre-aramidfibre hybrid reinforced plastic for an inorease in weight of only 99lb over the non-powered model. This includes the additional engine instrumentation, retraction/extraction mechanism, batteries and generator system plus electric starter and wing tip wheels. The newest DEI (Digital Engine Indicator) system is used and all safety function interconnects are employed as in the DG-400. Wing span is 17 meters with detachable tips for a 15 meter version. Fuel tank capacity is 20L. The tailwheel is non-steerable. Dirks claims the DG-600M can be taxied either into the wind or oross wind but not downwind. Empty weight is 672 lbs and maximum weight is 1,157 lbs for both 15 and 17 meter configurations. Maximum wing loading is 9.83/9.28 lbs/sq.ft. in 15/17M oonfigs. Best glide ratio is 44.5/15M and 48.5/17M. The wing is carbon fiber and features a one piece flaperon control. Double story airbrakes and a heavy duty wheel brake provide effective glide path control and braking power. There are no published figures at this time for rate of climb and takeoff distanoe. Aocording to Dirks, the M version is equal in performance to the non-powered 600. Delivery positions are available beginning April 1991. Delivered price in the U.S. with trailer and full instrumentation is estimated at $80,000.



FACTORY REPORTS...



DG-400 Automatic prop. brake and engine extension/ retraction control- "BEA" This option permits automatic extension- retraction of engine by simply switching to Avionic+Engine and switching on the ignition. When these two steps are completed the engine extends and the starter button can be pressed as it extends, engaging when fully extended. This saves time with no necesssity to operate stick mounted ext/ret. switch. To retract-set throttle to idle and switch ignition off. The prop is autmatically braked to the vertical position and retraction begins. "BEA" is available as a retro-fit kit. [1,590 DM]

A bug wiper kit is also available to clean the leading edge of the wings. Dirks claims as much as 20% of performance is lost due to wing leading edge bug residue. Also thermalling airspeed must be increased dramatically when bugs are present. The automatic electric version is recommended. [2,600 DM]

TRAILER BRAKES...

Parts for Cobra available from Glaser-Dirks USA. Parts for Komet available from PIK*Pacific. Relining possible locally as long as no metal damage.

ROTAX 505 Sheet Metal Cooling Duct...

Vibration can and does cause cracks. Stop drill where possible. One pilot installed a doubler where the duct bolts to engine head at bottom. If heavily cracked, it is best to install a new duct. Carefully radius all bends with small file to relieve stress. This is a Glaser-Dirks part. Order from Oliver Dyer Bennet at 707-942-5727.

ROTAX PARTS....

Normally available from U.S. Rotax parts distributor, Bob Marshall 415-634-2310. Do not order direct from Rotax factory and return any failed parts through Bob for factory inspection and disposition.

GLASER-DIRKS TN 626/22...

SLSPA has photo sequence of change out of the engine/ starter mounting bolts. This is not a difficult TN. Be sure and retorque to handbook specs. Send SASE for photo sequence and do not forget to locktite all bolts and mark with anti-sabotage paint.

MIKUNI CARBS.....

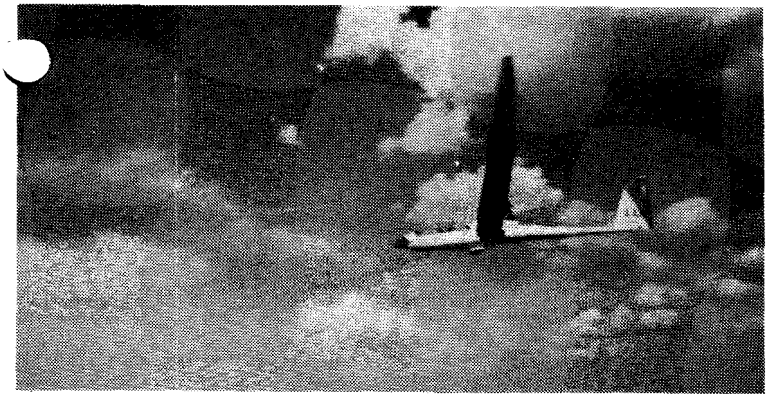
We are advised that the hardware cost is $358.41 each from Bob Marshall.

PIK-20E TYPE CERTIFICATION INFO....

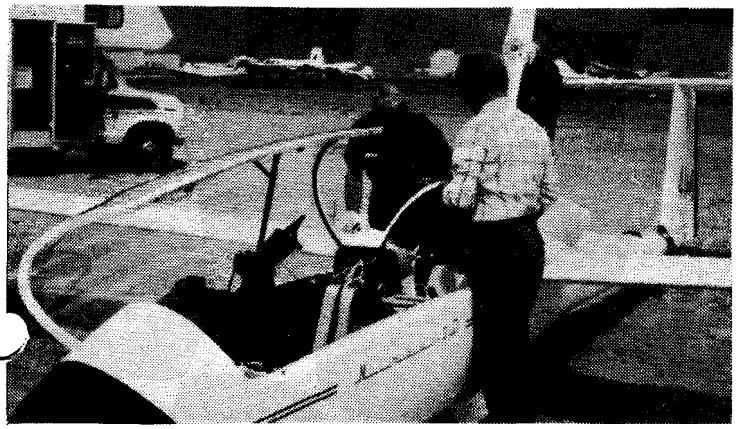
We are advised by Len Gelfand of Ottawa, ON, Canada that to obtain information regarding the PIK 20, 20B, 20E and 20EII type approval, pilots should contact Volar Plastic, Tiilitie 1, Nastola, FINLAND. The technical director is Mr. Aki Suokas who can supply drawings or manufactured parts. The phone number is 011 358 18 624211/FAX 011 358 18 624606. The General Manager is Mr. Olli Walden and fluent English is spoken. So if any PIK-20E pilot desires to Type Certificate his bird-all of the necessary information on operating limitations, placards, and technical details can be provided by Volar Plastic.

SAFETY ALERT....

The British Gliding Association (BGA) Accident Summary reports a DG-400's airbrakes came open after takeoff. The pilot noticed the climb was sluggish, whereupon the 400 nosed over (stalled) and collapsed the undercarraige upon striking the ground. No injury. *Again-the airbrake fittings should be safety pinned after a positive connection is made. A good rule of thumb would be to glance at the wings as you go from -4 to +6 flap position. Also make sure you have a good positive "lock" forward on the handle before applying power. The TOTAL answer is a POSITIVE control check at both open and closed brake positions. Take time every flight for positive control checks eventho the bird has not been disassembled. Just do it!*



Al Martini's Nimbus 3DM lifts off at Douglas County Airport/Minden. Ray Gimmey, Co-pilot. Al's new bird has a complete re-design of the vertical fin and a shorter tail boom for improved directional control.



MEMBERSHIP RENEWAL FINAL NOTICE!!!

If your newsletter contains a yellow renewal slip, we have yet to recieve your annual dues for 1990-91. This will be your last newsletter unless you send in your annual dues along with the renewal slip. Thanks!

MEXICO TO VANCOUVER IN A DG-400....

Tug Willson, an ex-RAF pilot and recently retired airline pilot (Cathay-Pacific) has completed several soaring safaris in a self-launcher, the most recent being a 5-day (Sept 1989) cross-country flight covering 2,500 km from near the California/Mexican border to Vancouver. Following are some excepts of the flight as taken from Feb/Mar 1990 Sailplane and Gliding.

Day One: Ernst CA to Auberry CA
Day Two: Auberry CA to Quincy CA
Day Three: Quincy CA to Mt. Home Idaho
Day Four: Mt. Home to Cashmere Washington
Day Five: Cashmere to Boundry Bay, Vancouver.

Tug never used the engine except for launch and covered over 827km on day three. He recounts " Day three began sunny with a weak system forecast to move in across track. Unfortunately the weak system obliterated all thermals. Rather than land, I decided to run east ahead of it. Six hundred kilometers later just north of the Bonneville salt flats conditions improved to the north and I battled a 20 kt headwind at 12,000' cloudbase to land at Mountain Home, Idaho. The day's distance was 872km but only 562 in a straight line. Even worse, I was only 90km closer to Vancouver! But what a day."