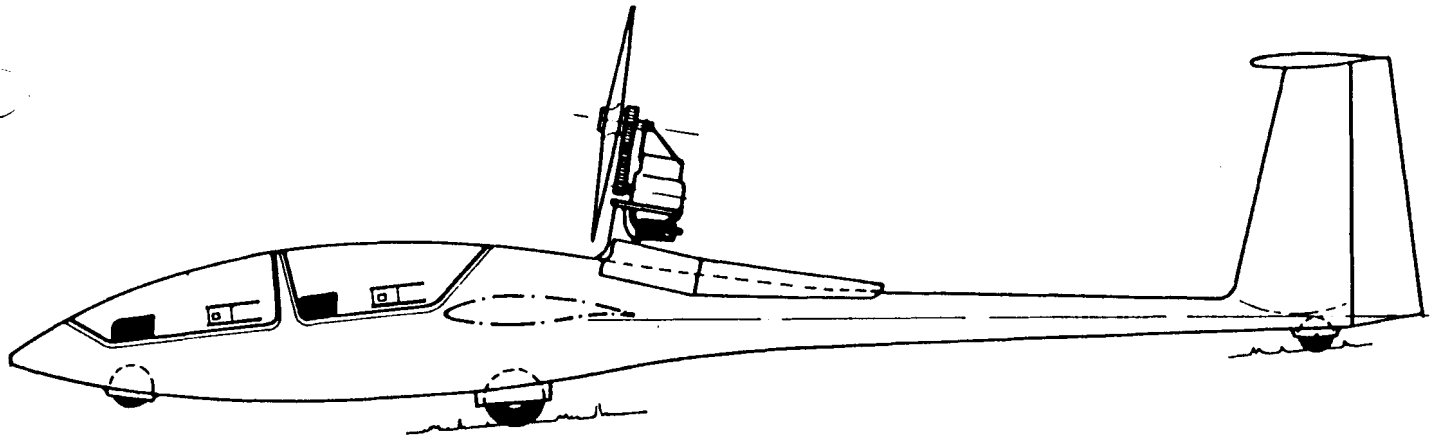
DG-500M 2-Seater Self-Launching Sailplane



This 22-Meter ship is powered by a retractable Rotax 535 2-stroke 60 h.p. liquid cooled engine. Empty weight is 1,152 lbs. Maximum takeoff weight is 1,819 lbs. at a wing loading of 9.24 lbs/sq. ft. VNE-146kts. Stall-36kts. Rate of climb under standard conditions at sea level is 490 fpm (1,609lbs.) Min. sink @ 1,411 lbs. is 100 fpm. Glide ratio is over 47:1 at 50 KIAS. The DG-500M can be taxied on the ground using its steerable nosewheel.

Self-Launching Sailplane Pilot's Assn.

NEWSLETTER

JULY - AUGUST 1992

blished Bi-Monthly by SLSPA, Inc • Pete Williams, President and Editor • Jim Culp, Vice President • Issue #26 Vol. IV

RFI Caused by Flight Computer Digital Noise...

Is your VHF radio noisy when your computer is on? Does it make "clicking" noises, especially when you dial in miles, altitude, wind or other data? One pilot reports after installing ferrite isolators the noise was less but still continued to be distracting. After moving CPU wires away from the radio antenna connection, the noise still continued. If there are any members who have solved this problem, please contact SLSPA.

Microburst Alert.....

Summer thunderstorm activity can produce areas of sink that can put a sailplane on the ground in a matter of seconds. This phenomena is well known and has put airlines on the deck even after full power was applied. Pilots should be aware that when in the area of a thunderstorm, or even after the storm has passed, there may be large areas of rapidly descending air. Final glides should be planned with plenty of margin and engine use decision moved up to an altitude that permits escape routes to less convective areas.

WANTED

Scheibe SF27M or similar self-launcher with retractable engine. Homebuilt projects considered. Must be affordable.

Joe Darlington
2 Shannon Ct.
Medford, NJ 08055
609-654-8137

Minden—A Powered Sailplane Base?

On 18 May, 1992 a total of nine (9) powered ships were counted on the flight line:

Nimbus	3DM 4AM	Al Martini from California
Nimbus	3DM AF	Jerry Wenger from Minnesota
Nimbus	3DM B	Al Blackburn from Virginia
DG-400	5N	Pete Williams from Minden
DG-400	SUN	Mike Byrne from California
DG-400		Helmut Koehler from Germany
Ventus	CM	Ingrid Koehler from Germany
Ventus	CT	Paul Stone from Wisconsin
PIK-20E	3L	Wayne Martin from California

LIQUID MEASURES: (US)

1 PINT	= 16 FLUID OZ	= .473 LITERS		1 PINT
2 PINTS	= 32 FLUID OZ	= .946 LITERS		1 QUART
8 PINTS	= 128 FLUID OZ	= 3.784 LITERS	= 4 QTS	1 GALLON
40 PINTS	= 640 FLUID OZ	= 18.92 LITERS	= 20 QTS	5 GALLONS

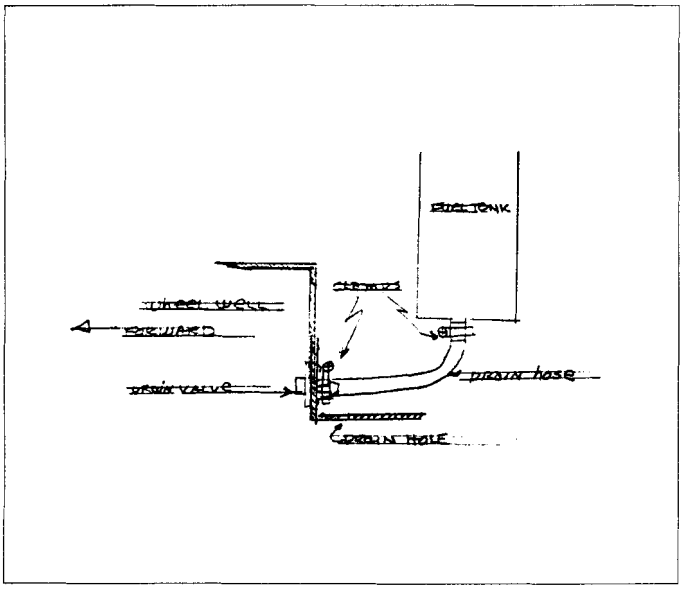
FUEL/OIL MIXTURES FOR 5 GALLONS:

50/1	640/50	= 12.8	FLUID OZ	= .3784	LITERS
40/1	640/40	= 16	FLUID OZ	= .473	LITERS
30/1	640/30	= 21.33	FLUID OZ	= .6306	LITERS

DG-400 Fuel Tank Drain Valve Hose Replacement...

This service bulletin provides for replacement of the drain valve fitting bracket, enlargement of access hole where drain valve bracket is attached and installation of rivenut fitting to permit removal of drain valve bracket plate to remove and replace the drain hose. This job requires at least one afternoon's work as it is not easy as to get at the hose fitting where it is clamped to the bottom of the fuel tank. It's all done by feel and requires a long arm and finger dexterity. If your ship has "oily gunk" in the bottom of the forward engine bay, you most likely have a seeping hose connection to the drain valve. Change of this and other "inside the fuse hoses" is required every 5 years. Order the new bracket for the fuel drain fitting from Glaser-Dirks. Obtain several rivenuts and a rivenut tool from your local aircraft maintenance facility and roll up your sleeves. See diagram below.

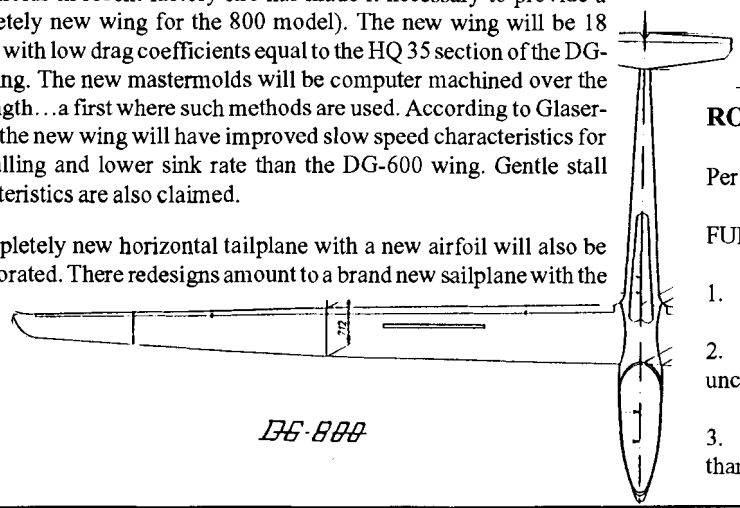
SLSPA suggests the Glaser-Dirks factory consider mounting the drain pipe from the bottom of the fuel tank with a forward bend of 50-70 degrees. The end of this pipe should be aimed at the wheel well aft bulkhead exit hole so as to provide easier access to the hose clamp.



DG-800M UPDATE...

Glaser-Dirks has announced the complete redesign of the wings for the new DG-800. (A reliable source reports substantial damage to DG-600 wing molds in recent factory fire has made it necessary to provide a completely new wing for the 800 model). The new wing will be 18 meters with low drag coefficients equal to the HQ 35 section of the DG-600 wing. The new mastermolds will be computer machined over the full length...a first where such methods are used. According to Glaser-Dirks, the new wing will have improved slow speed characteristics for thermalling and lower sink rate than the DG-600 wing. Gentle stall characteristics are also claimed.

A completely new horizontal tailplane with a new airfoil will also be incorporated. There redesigns amount to a brand new sailplane with the latest in aerodynamics and controllability. Production flight tests of the new 800 is expected before the end of 1992.



Glaser-Dirks is conducting a survey of potential buyers to determine if removable tips to 15M are desired or if the full span should be 18 meters with no removable tips. The 43hp Rotax 505 will power the 800.

Customers with options to purchase will be given the opportunity to solidify their position with an additional deposit with the price frozen @ 149,600DM.

Some Specifications:

Span ..... 18M (59.05')
Wing Area ..... 127.125 sq. ft.
Empty Weight ..... 723 lbs.
Ballast ..... 31.7 gals.
Max TOW ..... 1,157 lbs.
Max Wing Load .... 9.1 lbs/sq. ft.
L/D ..... 50:1+
T.O. Dist..... 885' to clear 50' obstacle @ 992 lbs.
Climb Rate ..... 728fpm @ 992 lbs.

AUSTRALIAN LS-3 17 T.O.P....

David Berenholtz of Black Rock Australia reports there are six T.O.P. bolt-on engine self-launchers flying "Down Under".

The engine is a 3-cylinder Konig producing 24 hp at 4,000 rpm. Weight gain is 97 lbs and Dave reports 2 L/D points lost when motor is on. He reports a climb rate of 350 fpm at about 927 lbs. Under seal level standard conditions using a hard surface runway, the handbook shows 885' for liftoff and 1,627' to clear a 50' obstacle.

Davis says he uses long hard surfaced runways for take off and landing and always has an emergency field in mind.

More info? David Berenholtz
125 Bluff Rd.
Black Rock
Vic 3193 AUSTRALIA
FAX 61-03-5983370

ROTAX FACTORY REPORTS ON FUEL AND OIL...

Per letter form Bombardier-Rotax dated 6-5-92:

FUELS:

1. Super Unleaded is recommended fuel.

2. 50/50 mix LL100 & super unleaded is acceptable compromise if uncertain about quality of super unleaded.

3. If 100LL alone used. change the spark plugs frequently, (no more than 10-15 hrs).

("Good" super unleaded was mentioned. How to know if it is "good" is the question. Suggestion: Refrain from buying fuel at Mini-Marts. Ask local brand name gasoline vendor where he gets his fuel and call the bulk plant's chemist to find out what (if any) additives are used. Stick with one source and be aware fuel additives added or omitted according to the season. Ed.)

OILS...

1. Sticking rings are caused by oils that do not have enough heat resistance such as outboard motor oils.

2. All oils mentioned in May-June '92 Newsletter page 3 are acceptable according to Rotax.

3. If changing to another oil, be sure and drain and flush fuel tank thoroughly. DO NOT MIX different oil/fuel brand combinations as gumming may occur.

INSURANCE AND DISABLED ENGINES...

It has come to the attention of SLSPA that there may be a question as to whether insurance companies will cover losses occurred where the engine is disabled in a powered sailplane. Pilots who are considering disabling the engine to prevent air starts should consult their insurance carrier.

OZONE LAYER TO BE PROBED WITH POWERED SAILPLANE...

In 1994 NASA will launch a 1,300 lb powered sailplane to FL 85 to measure the ozone layer condition. Called the ER-2, a twin rotor wankel developed by Norton will drive a 15 ft. tail mounted propeller. An exotic blend of exhaust gas gasoline and liquid oxygen will fuel the engine along with huge intercoolers and radiators. First flight proof-of-concept version used Rotax power. Aurora Flight Sciences of Manassas, VA is developing the "Perseus" drone under a NASA grant. It is designed to cruise at 180 kts. At an L/D of 70:1 (help from jet stream) flying east. this ship could cover over 1,100 miles during a final powerless glide.

CORRECTION...

In the May-June '92 Newsletter the AWS-24E was described as having pull cable starting and no generator. The factory advises that the ship comes standard with an electric starter and the pull cable for starting is an option. Also an alternator/generator is standard equipment. Our apology to Schleicher.

Waibel also advises that 400kg (881 lbs) is a more typical takeoff weight and that the takeoff run and climb rate will be reduced from the figures for 815 lbs. (370 kg) as specified in the May-June '92 Newsletter.

FOR SALE:

☛ VENTUS C Turbo/ 1987/ 325 hrs TT/ 16 hrs Engine/15 and 16.6 Meter Tips/ all controls sealed/Dittel 70M/ Cambridge L-Nav /Cobra trailer with 1 person rigging/April '92 annual/No Damage History/ Always Boxed/Never Raced/

$69,750 all up or less if L-Nav and Radio removed.

Paul Stone: 414-336-1396/FAX 414-336-0826 (Wisconsin)

☛ DG-400: Single owner,TTAF 24hrs; TTE 30hrs. Cambridge M-Nav; Dittel 60m; Aerograf Baro; Tinted Canopy; Cobra Trailer:$65,000.
☛ DG-400: Low time; most options; Cambridge S-Nav 3.5; Dittle 50 radio; Minden-fab one-man rigging trailer; All service work by Glaser-Dirks USA...$65,000

Contact: Glaser-Dirks USA 707-942-5727 FAX 707-942-0885

ROTAX TECH. BULLETIN 505-06 dated 1-28-92...

Subject: New DUCATI Electronic Boxes. Installation of.

Applicability: Motorglider Engines 505 and 505A up to serial No. 3,332,887

Reason: Old Polar Fire Electronic Boxes no Longer Available.

Urgency: As required when Electronic Box replacement becomes necessary.

Procedure: Order Retrofit Kit 965 679 from Rotax Rep. Bob Marshall 510-634-2310.

Kit Contains: Revised Engine Operator's Manual
2 DUCATI Electronic Boxes
4 BR8ES Spark Plugs
Connectors, Insulation Sheath, Wire & Shrink Hose
Tech Bull. 505-06 Installation Instructions

Order Mounting Hardware from Glaser-Dirks USA, Oliver Dyer-Bennet 707-942-5727

Editor's Note:

Due to the physical size of the new Ducati Boxes, a new mounting bracket must be used, This is furnished by Glaser-Dirks. According to Rotax all new 505A engine installations will have the Ducati ignition system. No work or exchange of parts is necessary in the coil area behind the flywheel for this retrofit. Rotax advises to not mount the new boxes to the beam of the engine as the old ones are and SLSPA has not yet been advised by Glaser-Dirks of the availability of revised mounting hardware including the mounting location of the Ducati system. The crux of the matter is the old boxes are not being made anymore. For a copy of T. B. 505-06, send SASE.

From experience, your editor has learned that a box failure may not always be a box failure. Symptoms are:

1. Ignition checks on circuits I and II may produce the following: NO RPM DROP on 1 circuit and NO RUN on the other circuit. This can be checked by simply switching the connectors between the boxes. If the problem moves to the other circuit...the box is suspect.

2. If there is no change in circuit test after swithching the connectors between the boxes...inspect the integrity of the spade connectors in the phenolic blocks of the connectors. Also the brown wire lead may not be grounding to the metal sheath that runs from the connectors into the coils behind the flywheel. See the 505 Engine Repair Manual Pages 21-22 for troubleshooting procedures.

If only one plug per cylinder is firing, there will be a tendency to flood easily. If the engine does not start after 10 blades, stop cranking, remove plugs and check for wetness. Remember the batteries must be strong enough to swing the prop to at least 300 RPM for the ignition circuit to fire properly. A fully charged battery (12.8V) will provide about 500 RPM.

5th Auxiliary Powered Sailplane National Championships Littlefield, Texas

A more complete report will follow. There were 8 contest days, 4 of which were Post Tasks.

Estrada	E8 Ventus CM	5805
Pollard	ZQ Ventus CM	5070
Buck	H Ventus CM	3930
Schurmeier	QK PIK-30	3644
Clark	5C DG-400	3374
Noyes	NL Ventus CM	2318