

# Self-Launching Sailplane Pilot's Association

N E W S L E T T E R

SEPT/OCT '88

Pete Williams, President and Editor//Jim Culp, Vice President

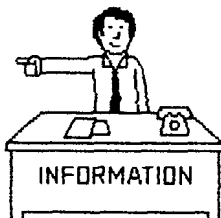
## MORE ON ROTAX TOP PISTON ROD BEARING FAILURES....

Glaser-Dirks reports another such failure in England at about 100 hours engine time. Dirks said he was in contact with Rotax and requesting a TN be issued. Your editor has been in contact with a local Phoenix Rotax repair shop who reports similar failures in Rotax engines used in ultralights. According to the manager of this shop, the top needle bearing at the piston/rod juncture is pitting due to high stress. He reports that at 175 hours, he has repaired many engines by replacing these two bearings. The only clue he can offer is a very slight rough running as metal particles contact the plugs. We have one member who experienced this failure at 118 hrs, in flight no less. The rod cracked the case making necessary an engine change. The Rotax factory has been contacted by your editor and we are expecting action. Most members engines are under 50 hours but if this is indeed a problem, precautionary measures must be taken. You will be kept advised. As a matter of interest, changing these bearings is not considered a major overhaul. The rings can be checked at the same time and the crankcase properly resealed.

## ROTAX PUBLICATIONS AVAILABLE

The Rotax factory in Austria has sent SLSPA several publications covering the maintenance of various Rotax engines. Copies of these publications are available to SLSPA members for the cost of reproduction and mailing as indicated below:

**Pilot's Operational Manuals**-\$2.00/ea.  
501/PIK-20E; 505/DG-400&PIK-30; 505A/ASW-22; 535C/Janus CM, Nimbus 3DM&DG-500.  
**Repair Manuals**-\$2.50/ea. (Illustrated)  
501/505 and 535  
**Engine Parts Lists**-\$2.50/ea. (Illustrated)  
501; 505; 535  
**Tillotson BN-38 Carb. Parts List**-\$1.50/ea.  
(Illust) 505 & 505A  
**Service Bull. BUL 87/D**-\$1.50/ea.  
High Altitude power loss and carb adjustments.



## FACTORY REPORTS:

### Glaser-Dirks:

**Landing Gear** adjustments are made per Maint. Manual page 11 1.6.2b (TN 826/20).

Dirks reports that they have had no reported problems due to **dust in the carbs**. *I would like for Rotax to comment on this.*

**Tailwheel installation:** The brass bushing should not be allowed to rotate and must be clamped between the two tailwheel fork legs. The plastic wheel must rotate on the bushing.

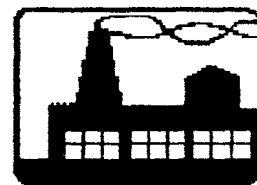
**Soft or hung airstarts:** If the engine does not run above 2,800rpm's, it is running on one cylinder. Use the choke to solve the problem or increase airspeed. *This makes sense as when I had this problem, the engine went to full rpm only when I pushed over from 50Kts to 65Kts. Ed* This starting problem occurs when the engine is half warm according to Dirks.

### Bombardier-Rotax:

**Bosch Starter**- This starter is replaced with an American-made starter available at local repair centers Type: AB SMH 12A 103 Li.

**Ignition System Firing**- The 505 has a CDI where the ignition system is independent of the electrical system. Battery condition has no effect on the CDI system. Battery voltage does have an effect on raising and lowering the engine and the speed of cranking when starting.

**High Altitude Jets**-See Service Information Bulletin BUL/D publication. The main difference between the Tillotson HR carb and the B-38 is color: HR is aluminum the BN-38 is black. The changeover to BN-38 was in Feb. '86.



## SLSPA DECALS AVAILABLE

A decal is enclosed in this Newsletter for each member. This is a high-quality die-cut 3M decal that will not fade in the sun. Additional decals are available at \$2.50 ea. to cover costs and mailing. The decal measures 4" X 1.5". The colors are red white and blue.

Factory Reports continues...(Bombardier-Rotax)

**Starting:** B/R recommends the following stopping procedure to make starts easier: Reduce throttle and close fuel cock; when engine stops due to lack of fuel, turn off mags and open fuel cock momentarily prior to final closing. This drains carbs and provides for best starting conditions.

**Conrod Bearing Failure possible reasons:** Poor quality oil; Too much fuel has "washed out" oil in bearing area; Previous overspeeding of engine; Long storage periods in moist conditions; Wear due to sand and dust ingested by the engine; They also said you can hear the bearing noise and should shut down immediately.

**Carb. Air Filters:** No such filters defined for engine. They say K&N filter could be a solution but needs dyno verification and space is a problem due to tight cowling of the tops of the carbs.

**Rectifier Regulator:** B/R sent a Service Info sheet on how to check output of this regulator to determine if it is recharging the battery properly. *Ask for it and I will send it. Ed*

*I suggest B/R consider developing a carb filter system as a matter of priority. Dust exists and with the remote possibility of dust contributing to the failure of conrod bearings, it seems logical to protect the air entering the system with the same vigor the fuel system is protected from dust and grit with fuel filters. I know of no aspirated engine in existence today that does not have an air filter. We also need factory analysis in detail of conrod failures. More to come on this. Ed*

## MAINTENANCE QUESTIONS..

**BRAKE LININGS:** We need more definitive info in the next Handbook revision on the minimum thickness of the linings at which time they should be renewed.

**BEARING LUBRICATION:** Is it necessary to periodically lube the propeller bearing? When should the main wheel bearing be repacked.

**ENGINE MAJOR OVERHAUL:** What U.S. and Canadian Rotax licensed aircraft engine facilities are authorized to perform a major overhaul and what is the approximate cost.

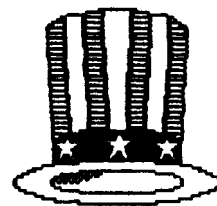
## SURVEY RESULTS FOR SLSPA MEMBERSHIP

The consensus of opinion of the majority of the members is that SLSPA should be a Division of SSA and open to all types of self-launching sailplanes and to anyone else who is interested in the concept.

With that in mind, it appears that the next order of business is to set wheels in motion with SSA. Your editor has been in touch with Paul Schweizer who heads up the Board that accepts applications from organizations who desire to become divisions of SSA. He advises that we will have to have all details worked out by the end of the year with SSA Board approval coming at the '89 Convention. Here is the procedure: We must incorporate as a non-profit organization and send a copy of our by-laws and certificate of incorporation to SSA. SSA then sends us an agreement to sign and then submits this agreement to the SSA Board for approval.

There are advantages to being a Division in that we are listed in the masthead of Soaring Magazine and derive our authority from FAI thru NAA and SSA. We will also get one page in Soaring each year as an ad to tell our story. So there it is and all we need now is the kind assistance of a lawyer-member to get past the Inc. paperwork. I will revise the Charter to reflect the survey and we can go from there with the boilerplate by-laws and corporate procedures provided by an attorney. I see no problem here as our membership contains two lawyers and a retired appellate judge. Delaware may be the best place to incorporate but I will leave that to the experts. How about it guys?

## FIRST U.S. NATIONAL AUXILIARY-POWERED SAILPLANE CLASS SOARING CHAMPIONSHIP RESULTS....



Twelve contestants made it to Uvalde and participated this inaugural event which was a total success in every way. There were no engine problems and we flew eight out of nine contest days. The weather was not exactly typical for Uvalde except for about 4 days with over development and rain showers shutting down the area by mid afternoon. We launched last each day behind the Open Class ships which made starts somewhere between 1430 and 1500. David Stevenson was the clear cut winner placing first every day except one when Don Pollard eased ahead by 14 points to win on Day 7. Dave seemed much at home in the Uvalde area and attained excellent speeds despite soggy skies and uncertain weather conditions. There were no landouts by the motorized group which became affectionately known as "The Buzzin' Dozen". Line operations ran smoothly with only 2 minutes required for the six self-launchers to get airborne. The Rules were massaged and finalized at a pre-contest meeting of the contestants. Handicap factors were applied according to span and performance with many pilots selecting the 17 meter mode. Self-launchers had to secure the engine by 2,000' agl and the sustainers were required to have short engine run after tow release. It was quite a sight to see the self-launchers take off as a group and motor up in single file to the first

upwind thermal. The contest officials voiced an opinion that they wished everyone had an engine to simplify and expedite launch operations. There was complete harmony with the Open Class. In fact, we have been invited by the Open Class to combine with them again at the 89' Nationals at Hutchinson Kansas.

An engine recording baro trace was submitted daily by each pilot and any engine run after passing thru the gate was penalized based on rate of climb, climbing speed and L/D per manufacturer specs.

Karl Abhau from West Germany was a contestant and sat in on rule discussions. Karl was instrumental in establishing motor gliding competitions in Europe and holds several World Records in motorgliders in distance triangles, out and return, speed and Goal flights. He has over 1,200 motorglider hours and has been flying his Nimbus 2M for 10 years. We appreciated his support.

The key persons behind this event were Dave Stevenson, Don Pollard and Bud Shurmeier who worked with Eric Mozer to get approval to hold this contest. The individuals who attended came from all over the US and we thank each and every one of them for their enthusiasm and the effort it took to make this thing happen.

Only three of the 12 contestants never used their engines during the task. Speed task performance varied from 78 to 45 mph. On POST days, we had speeds between 76 and 50 mph and distances from 236 to 139 miles with a 3.25 hour window. Sickness and not being able to get away from the field on weak days DNC'd several contestants but all hung in there to the finish.

So this is indeed the beginning and we are looking forward to next year and more contestants as 15 are required for seeding. Hopefully in 1990, the US will field its first team for the World Motorgliding Championships. A beautiful sterling silver tray perpetual trophy was awarded to Dave. This trophy was donated by Ruth Stevenson in memory of her husband, Mike Stevenson. The tray was originally a Golf trophy won by Dave's dad. Don Pollard and Roger Buchanan were awarded distinctive trophies of carved mesquite.

Enough cannot be said about Mark Huffstetler, his wife Kerry and their immediate family who almost single-handedly ran the complete contest. They made all of the arrangements for suppers, river floats, the banquet and the Coors beer hosting. This was Mark's first contest directors position and he came through with flying colors even in the face of uncertain weather conditions that would try the patience of Job. Uvalde is most likely the friendliest place any sailplane pilot will fly. It can also be the most challenging. On the rest day all motor glider drivers and birds were carefully lined up for a photo session that hopefully will be the cover of SOARING magazine this November.

A complete story of day-by-day events will be published in Soaring. The final results are:

PILOT	A/C	POINTS	HOME TOWN
Dave Stevenson	DG-400	7363	Atlanta GA
Don Pollard	Ventus B/T	6571	Roanoke VA
Roger Buchanan	Ventus B/T	5891	B. Meade NJ
Peter Blacklin	DG-400	5884	Baltimore MD
Al Heath	PIK-20E	5436	Houston TX
Mark Macaulay	DG-400	5190	Austin, TX
Karl Abhau	Nimbus 2M	5065	W. Germany
Alan Greer	Ventus B/T	5013	Eustis FL
Pete Williams	DG-400	4256	Glendale AZ
Oliver Suddard	DG-400	4101	Wilmington DE
Ken Ferguson	DG-400	3875	San Jose, CA
Bud Shurmeier	PIK-20E	3464	Fallbrook CA

#### GLASER-DIRKS EAST OUT-OF-BUSINESS SALE

Tailwheel tyres-\$15 Tailwheel Tubes-\$5  
Fuses (1-10 amp)-\$2/ea. Prop Drive Belt-\$50  
Fuel Filter-\$9/ea. Fuel Pump System-\$135  
Flap Handle Grip-\$2 Spoiler handle Grip-\$2  
Flannel Canopy Cover-\$40 High Altitude Jets-\$12  
Mecaplex Sliding Window Guide Rails for Canopy-\$20/ea.  
Komet Black Handle for Trailer Top lift-\$4  
Quality T-Shirts S,M,XL-\$9 LS-4 Rubber Tip Skids-\$35  
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DG logo decal/keyring/auto compass-FREE withl order.

First Come, First Served. Add 10% for S/H. Order from:  
Robert Gaines, 308 Chase Lane, Marietta, GA 30068 or  
call 404-973-1414.

#### MEMBERSHIP SURVEY UPDATE

We now have 9 PIKS, 28 DG-400s, 3 Ventus B/T, 2 Strojnick S-2A, 1 Moneri and 1 Taifun 17E in our membership. Based on 37 application forms now in the average SLSPA member profile is:

17 yrs SSA Member  
1,090 Soaring hours all types.  
282 motorized soaring hours  
2,205 conventional power plane hours.  
(With airline pilots removed this average drops to 1,293)

Types of flights flown out of 37 respondees:

Cross-Country-31  
Records- 8  
Competition- 16

*In the Next Issue: Latest Bombardier Rotax response on piston pin bearing failures. In the meanwhile make sure you are not running on a lean mixture and use a top quality 2-cycle oil. Yamaha R recommended.*