

# APS NEWS

*The official Publication of the Auxiliary-powered Sailplane Association, Inc.*

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Nov - Dec 2005



Eric Greenwell Wave Soaring

**In this Issue:**

**DG 505 Engine Upgrade**

**Improve Your Fueling System**

**UFO's over Iowa**

**Tech Talk with Gary Evans - Brake Bleeding**

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## Newsletter by E-Mail?

No More Snail Mail.

Opt-in

Send an email to:

[asa\\_electronic\\_news@mindspring.com](mailto:asa_electronic_news@mindspring.com)

## President's Corner

I'll start this month's column with congratulations to Rick Howell for his acceptance of the nomination and unanimous vote by the ASA Board of Directors to become the next President of the Auxiliary-powered Sailplane Association.

Rick has had a long and successful flying career in corporate aviation and the airlines. He is now retired and actively flies his Ventus BT in all the motor glider activities. Rick has been active in organizing the national contest and fly-ins as a board member in the ASA. There is no doubt that he will do a fantastic job as President, so let's all get behind him and give him our support.

It's time to start making arrangements to attend the SSA Convention in Arlington, TX. By the looks of things, this promises to be a Texas-sized convention. BIG. The Convention Staff and the SSA Staff continue to put a lot of work into programs and activities which will interest everyone.

The Plane-side presentations have been of interest to many. I think the electric motor self-launch concept will draw a lot of interest, and we may even have an electric Antares on the floor of the convention hall.

We are closing out another administrative generation in the ASA. The past three years have seen a full gamut of directions and emotions. We have lost two very important people from the board in Pete Williams our founder and APS editor, and Stan Nelson, our Safety Chairman.

Gary Haynes immediately stepped forward to take over as editor and the rest of the board jumped in to help. All have done a fantastic job. We have moved into the next century by developing websites and sending out the APS Newsletter via E-mail. Our membership continues to grow, not only in numbers but also in the interest of the many changes in the future of the Self-Launch Glider concept.

Fly Safe

Skip Atwell, Pres.

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## Been to a Sock Hop Lately ?

**Join the fun at the SSA Convention in Arlington, TX. Friday night the SSA is having a sock hop. Inquiring minds want to know if any of us can really do the Texas Two Step?? Sign up at [www.ssa.org](http://www.ssa.org) or check the current issue of Soaring magazine.**

## IMPROVED FUELING SYSTEM FOR DG SELF LAUNCHERS

By Terry Edmonds

My DG-800B came with the external fueling pump system. This is a great idea but I have tried to take the concept one step further. The system that comes from the factory has you insert the pickup tube into an open container of fuel. This has the potential to introduce contaminants into the fuel supply although the fuel filters should take care of that. But being a cautious pilot I like to eliminate any chance of problems wherever possible. Also the stock parts are a bit of a can of worms to handle and at the same time keep clean.



The photo shows how I have mounted the equipment on a commonly available plastic fuel container. It is my second attempt at doing this for a couple of reasons. The first attempt had the pickup tube and pump mounted with small bolts and adhesives as sealers. Over time 100LL fuel began to soften the adhesives. At about the same time the stock motorized fuel pump began to leak fuel internally which I immediately stopped using.

In looking for a replacement pump I found automotive parts stores carry electronic fuel pumps similar to the ones in the aircraft rather than motorized units. They come in a range of flow rates and I attempted to match the flow rate of the original DG motorized pump. The original pump is slow but I was concerned going to a higher flow rate might affect the pressure switch cut off point in the aircraft. The pump I used is a Facet # 60104. I did not try a faster one but I have

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## Coming Up in the Next Issue

**New Safety Column  
Ultralight Motor Gliders**

verified several times the tank is truly full when the pressure switch shuts off using this model pump.

The version I show here does not need any sealants to prevent leaks. The fuel line fitting that goes through the container is a 3/16" bulkhead mount fuel fitting with nipples on both ends (also available at auto parts stores). It is sealed with an O ring that is suitable for use with gasoline.



Inside the container I used a short piece of fuel line and clamps to connect the bulkhead fitting to the pickup tube that came with the stock DG equipment.

The pump is fastened with mounting tape to keep it in position and cable ties to secure.

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## Newsletter by E-Mail? What the readers are saying..

Thanks for a really nice job. Better then the printed version. Warren Osterhout

Great format for the news letter. And the pictures are so clear. Very nice. If people are not receiving the E version they are really missing something.

Robert Mudd

The Sept-Oct electronic news letter is excellent!

Please continue the good work.

Bill Jones  
HK36TTC  
N646TT

## Upgraded 505



You might be interested in the attached photo. This is a 50hp conversion that I undertook to the DG505-Orion, shown self launching solo from grass at a 7000ft density altitude. Climb rate under these conditions is about 1,5m/s. If anyone is interested in this conversion, they can email me at [afriair@mweb.co.za](mailto:afriair@mweb.co.za).

In the membership roster, under Related Organisations and Businesses, please note me as dealer for AMS and Stemme

Regards  
Peter How  
Composite Technologies  
South Africa

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## Looking for Pik

We are an Argentine company that produce aircraft and glider parts and we are very interesting to produce Self Launching Engine Kits.

Do we have any opportunity that you could help us regarding our basis low production cost.

In other hand do you know any Pik 20 E damage for sale?

Waiting for your comments.  
Best regards

Eng. Ulderico Pace  
President  
Aeropac SA



## TECH TALK

by Gary Evans

### GIVE ME A BRAKE, DISC THAT IS

#### *Replacement parts*

The hydraulic disc brakes most often used on gliders are labeled as Tost, which is a German company that sells various aircraft components. What isn't commonly known is that the Tost brake caliper is made right here in the U.S. by Cleveland Brake.

Cleveland brake calipers are intended for use with hydraulic (petroleum based) oil and since Tost uses it with brake fluid (glycol based) the O-ring ring material is changed for compatibility. All of the other parts for the caliper are available directly from Aircraft Spruce (search "Cleveland Brake"). <http://www.aircraft-spruce.com/>

The O-ring shown is the one for use with hydraulic oil but the correct O-ring material for brake fluid can be purchased from MSC as part #31953284 for \$8.76 (box of 50). The size of the O-ring is 1/8 diameter, 1 1/4 I.D and 1 1/2 O.D.

<http://www.mscdirect.com>

The O-ring material is EDPM (ethylene propylene) and the Aerospace Standard part number for this size is AS568A-218 which defines the size as 1/8 diameter, 1 1/4 I.D and 1 1/2 O.D. MSC does not sell the O-rings individually but perhaps your local Sailplane dealer does.

#### *Bleeding*

Glider brakes unlike automotive must be bled by forcing fluid in from the bottom of the system. If you don't do it this way you may never get all of the air out of the system. My glider (DG808) is especially difficult to bleed since it has a large upward loop of brake line between the master cylinder and the caliper, which traps air.

Because of this design it is necessary to unbolt the master cylinder and move it to several different positions while injecting fluid in via the brake bleeder valve, which is where the fun begins. The bleeder valve has a slight barb for attaching a hose but it was never intended to retain a hose under pressure that is being moved about during the bleeding process.

When a dry hose is pushed onto the barb it will stay in place only until slight movements allows brake fluid to get on the barb and then it pops right off. The only fix is then to clean the fluid off the barb/hose and start all over again

since this has allowed air to reenter the system. After trying several different hose materials to no avail I found a clever little connector made just for this purpose. It can be purchased from this vendor as part #1246 for \$20.95.

<http://Aircraft-tool.com>

This is the part as received.



The extra fittings can be removed from the connector with is a three part design.



This picture shows how the bleeder valve fits into a slot in the end and is held in place by the aluminum plug when the two halves are screwed to together.



This connector makes the bleeding process a lot easier.



Pressure bleeders for injecting brake fluid are available in the \$70 plus range but you can make your own from a simple garden sprayer available from a garden supply house less than \$20. You only need to shorten the sprayer hoses and attach the special connector.



I suggest rinsing it out well between uses with water since the internal part materials and their long term compatibility with brake fluid is anyone guess.

### Need a Motorglider Endorsement?

Please add me to your list of Motorglider Endorser:

Name: Jean-Pierre C. Ducos

Boerne Stage Airfield

Boerne TX 78006 (San Antonio)

MotorGlider training & endorsements from CFI-G-SSAI-  
Demo rides and Cross Country in a Grob 109 equipped for  
night VFR as well

Jean-Pierre C. Ducos

CFI-G-SSAI

jpducos@lear2soar.net

210-667-3716

## UFO's OVER IOWA

(or maybe we oughta layoff the eggnog!)



One day in the spring last year Mike McGlothlen and I were flying our DG self launchers locally out of the Iowa City and Muscatine, Iowa airports which are about 30 miles apart when Mike spotted an unknown object in the air and he had a camera with him so got a shot. Object was at about 5-6K' AGL.

The two photos are the same with the second one blown up in size. We have shown the pictures to a lot of knowledgeable people and no one has an explanation.

Terry Edmonds



## SO WHAT IS IT???

### ASA Mission

The Auxiliary-powered Sailplane Association, Inc. was founded in 1988 as a non-profit organization to encourage the design, development and safe use of motorgliders, self-launching and sustainer engine sailplanes.

### ASA Membership

Membership in ASA is open to anyone interested in powered sailplanes. Write or call: Brian Utley, ASA Membership Chairman, 9541 Virginia Ave. South Bloomington, MN 55438  
Ph: 952-941-5683 email: <Utleyb@aol.com> USA Dues \$20/yr, \$38/2 yrs, \$55/3 yrs. International Dues \$25/yr, \$48/2 yrs, \$70/3 yrs.

### ASA Officers

President: Lloyd "Skip" Atwell ..... 262-348-9488  
Secretary: John Sullivan ..... 734-668-6868  
Treasurer: Eric Greenwell ..... 509-943-9065  
Technical Advisor: Gary Evans ..... 480-380-2431  
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Publications: Gary Haynes ..... 720-255-9650  
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### APS NEWS Publishing Information

Gary Haynes, APS Publications Manager is the Editor and Print Production Manager. The APS NEWS is printed in printed in Denver, CO and mailed First Class. Contributors can mail hard copy text or use email. Text may be edited as required to fit the newsletter. Photos are always welcome. APS NEWS is delivered to the printer the last week of Jan, Mar, May, July, Sept and Nov. ASA desires input on what the members want in APS NEWS and we are doing all we can to keep it informative and interesting.

*It's your publication, so please let us hear from you!*

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## FOR SALE

### Powered Sailplane Instruction & Delivery

Dave McConeghey ATP CFI-Glider Self Launch  
Endorsement Kansas 316-409-9624  
Email: <mcconeghey@cox.net>

### RF5B For Sale

Dave McConeghey 316-409-9624  
Photos <<http://members.cox.net/motorglider>>

### PIK-20E

1979 454TTAF Rotax 501 Oxygen,  
**SOLD** Factory Trailer, Parachute \$38,000  
303-790-1907

### Scheibe SF-28A

1982 Tandeme-Falke motorglider, ~1200TT, 460 Engine (65hp Limbach 1700EA), custom covers, custom open trailer, Hoffman prop (recent overhaul), new canopy, new muffler and heater shroud. \$47,500 Matthew Poleski, 815-544-3870, <[matthewpoleski@aol.com](mailto:matthewpoleski@aol.com)>



### Stemme S10VT

Stemme S10VT s/n 11-036  
135 total hours All ADs, new prop, full panel, dual controls,



folding wings, excellent condition. \$210,000 Contact  
Raemon Polk: [rpolk@mindspring.com](mailto:rpolk@mindspring.com) or 404-435-3978

Diamond badge, motorglider CFGI is in the market for a Taifun (might consider a G109B). I value quality and am in no hurry. If considering selling, please contact me so that we can discuss your plans and my desires.

[glessard@verizon.net](mailto:glessard@verizon.net)



### DG 400

Werner Baeuml [seidenadler@yahoo.com](mailto:seidenadler@yahoo.com)

### DG 400

Airframe 1480tt, Engine 14.5 since Binder Overhaul. Komet Trailer, Mountain High EDS oxygen, Cambridge 302, winpilot and ipaq. A whole bunch of spares. Spare prop, drive belt, prop sensor, tailwheel and fork, fuses, tools, goodies, single man rig system, 15 meter with winglets .... 17 meter tips, wing wheel  
Steve Hill - [Steve@hillstamping.com](mailto:Steve@hillstamping.com)