

# APS NEWS

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May - June 2005

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Near Sierra Blanca - Alamogordo Fiesta 2004

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## Receive the APS News Electronically

You can now join more than 100 members that are receiving the APS news via email in an Adobe PDF format.

The benefits to you are:

1. Get the issue quicker. For our non-US members this might be a significant time savings.
2. File is PDF format and is generally in the 500-700kb range so doesn't take long to download.
3. The newsletter is in COLOR. All of the photos and other graphics are in color. With the number of folks that now have color printers you can still have a printed copy but in color.
4. It saves the association on printing and mailing costs.

This is an **OPT-IN** program. If you want to receive your newsletter via email please send an email to:  
[asa\\_electronic\\_news@mindspring.com](mailto:asa_electronic_news@mindspring.com).

In the subject line put "YES I want to receive my newsletter via email. <Your Name, Your email address>". Upon signing up you will receive the newsletter via email and will no longer be mailed a copy.

## President's Corner

First, I must thank all the Board Members of ASA, Gary Haynes our new publisher, and the entire membership of ASA for stepping forward to continue the process and publish the APS News. I had an opportunity to receive a copy of the first "electric newsletters." It is a fantastic publication and those of you who choose to receive your newsletter in that way will be very satisfied.

The ASA Board of Directors accepted Oliver Dyer-Bennet's offer to be the new ASA Safety Committee Officer. Oliver will be regularly writing an article for the APS Newsletter.

If any of you Glider Pilots have a specific flying experience or are knowledgeable in a specific area of flying self-launch sailplanes or gliders, I would like to ask you to submit an article to our APS publisher, Gary Haynes. Regular columns such as "Tech Talk" by Gary Evans are invaluable references to all of our members. There are so many variations, models, and manufactures that every little "tid-bit" of information that we can get to aid in our regular operation, maintenance, or flying is very important.

Since fall, most of us in the "northern climes" are just getting back into our gliders for the first time in a few months. In some cases this can be like a whole new experience, or it can be an opportunity to refresh our thoughts and skills. Go for a ride with an instructor; discuss the different phases of glider flying, i.e. cross-country, thermaling, pattern, etc., and also read the manuals. When you're satisfied that you are current with the flying aspects of the glider, then go over all the nuances of flying with an engine.

Pete Williams, in his book "Self Launch", talks about flight safety. He said there are five main areas of safe flying; attitude, training, knowledge, proficiency, and practice. Maybe this is the time we should reacquaint ourselves with all the different aspects of flying a self-launch glider safely.

Fly Safely  
Skip Atwell



Jeff Banks' AC5M along with Pete Brown's 1-23 out back in Alaska on a gravel strip south of the Windy Pass "Summit". The summit of Mt. McKinley is in the background.

## New Members

The first few months of this year have seen our membership grow significantly. We had a great response at the SSA convention in February and have kept the momentum going.

For our new members welcome to the ASA. We'd like to know more about you and encourage you to share your flying background and photos with the rest of the group.

Bob Adams	Eagle River, AK	DG-400
Art Canning	Long Beach, CA	
Patrick Healy IV	San Francisco, CA	
Peter Jago	Pamona, CA	
Frank Jenkins	Portola Valley, CA	
Jim Keefe	Coto De Caza, CA	
Edward Labahn	Dana Point, CA	
George M. Lessard	Redlands, CA	Russia AC5M/03
Allen Mikula	San Juan Bautista, CA	
Keith Moore	Oxnard, CA	
Doug Robinson	Littlerock, CA	HPH 304CZ
Gary Sada	Borrego Springs, CA	DG 800B
William T. Gagen	Colorado Springs, CO	
Bob Saunders	Telluride, CO	Steme S10VT
Ted Gordon	Old Lyme, CT	Ximango
Ted Nevius	Washington, D.C.	
Peter Fuss	Boca Grande, FL	ASH 26E
Knut Kjenslie	Clermont, FL	DG Dealer
Terry Wells	Kilauea, HI	Hula Girl Homebuilt
Mike Miglothlen	Muscataine, IA	DG 400 "TE"
David A. Dunn	Westville, IN	
Gerry Sibley	Bel Aire, KS	DG 300
Michael Nagel	Edgartown, MA	SGS-233, L-13
Fred Stewart	Granby, MA	
Albert Ishkanian	Chester, MD	
Mark S. Grant	West Bloomfield, MI	SG 1-35C
Steve Arndt	Concord, NH	Magic Dragon
Bill Reuland	Gardnerville, NV	DG 808B
Mike Baldwin	Armonk, NY	
Ted Whitmore	Gold Beach, OR	Russia A5
Gary Goolsby	Houston, TX	DG 400
Eric Ginther	Austin, TX	
Michael Graves	Plainview, TX	
Curtis L. Bryan	Enumclaw, WA	Russia AC 5M
Dagfinn Gangsaas	Bothell, WA	ASH 26E
Christian Klix	Arlington, WA	Std. Cirrus Western
Grant Smith	Renton, WA	
William Holm	Mosinee, WI	
Alfred Spindelberger	Edermuende, DE	DG 800B "SA"

# The Schleicher ASK 21 Mi



Alexander Schleicher has introduced the latest 2 seat self launcher with the ASK 21 Mi. Based on the venerable ASK-21 airframe the Schleicher team paired the ASK 21 with the 56hp Diamond AE50R rotary engine found in the ASH 25 Mi.

In recent years there has been a strong interest in the many areas of the world for student training to be done in motorgliders. The thought process is that many elements of training can be accelerated including emergency procedures in picking out off airport landing areas. Tom Knauff used to offer a specific training course addressing X-C operations and off airport landing training in a motor glider was a feature of this course. With the ability to fly the approach to the field and then power away for further training it allows the student pilot to hone the skills of off airport landings.

The Mi engine is the only fuel injected engine in a retracting pylon glider on the market today. Combined with the smoothness of a rotary engine, which has the advantage of not needing to have fuel mixed with oil, common to the two stroke engines used in other motorgliders, Schleicher has simplified operations for the crew. Full engine control is available from both the front and rear cockpits using the ILEC engine control system.







## TECH TALK

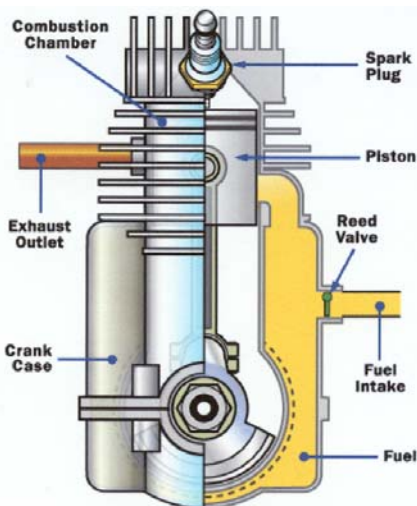
by Gary Evans

### TWO CYCLE ENGINES, WHAT ARE THEY AND WHY USE THEM?

It can at times be helpful in engine troubleshooting and maintenance to understand exactly what is happening in the noisemaker that turns our propellers.

The term "cycle" in an internal combustion engine means a piston stroke (either up or down). The term two cycle means that two piston strokes occur for each power stroke (one crankshaft revolution). A two-cycle engine utilizes –

- 1) The crankcase volume to hold air/fuel mixture in route to the combustion chamber.
- 2) The piston to act as a pump.
- 3) A valve (normally a reed valve) and cylinder ports for allowing air/fuel entry into the crankcase.
- 4) Cylinder ports to control combustion chamber entry of the mixture and exhaust of spent combustion gases. (Fig. Two Cycle Engine)



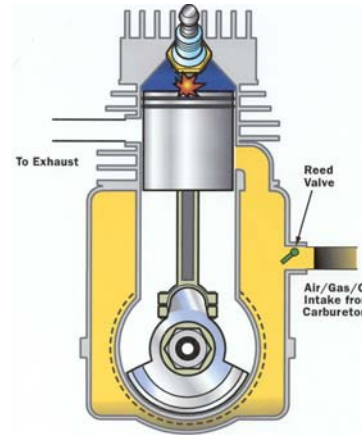
Two Cycle Engine

filled with air/fuel mixture from the previous cycle and the reed valve is closing because there is now no pressure differential between the crankcase and atmosphere. This is the beginning of the power stroke.

(Fig. Power Stroke)

Here the piston is moving downward creating a positive pressure in the crankcase, which holds the reed valve closed. As the piston moves down it first uncovers the exhaust port allowing combustion gases to begin exiting.

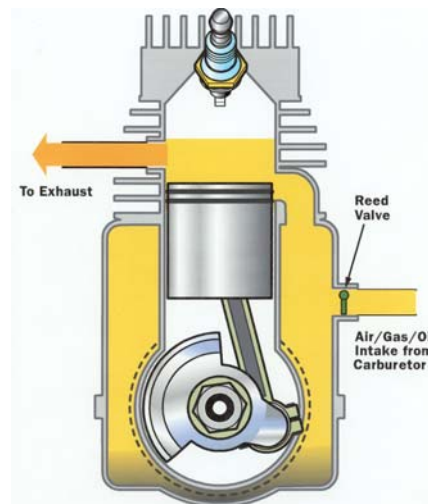
As it continues to move down it next uncovers the intake port, which allows air/fuel from the crankcase to begin filling the combustion chamber and blow out the remaining exhaust gases. This overlapping of both intake and exhaust ports is the main disadvantage of two cycle engines because it allows some air/fuel mixture to escape from the combustion chamber before the exhaust port re-closes. (Fig. Intake and Exhaust Stroke)



Power Stroke

Now the piston has moved upward past the intake and exhaust ports and is creating a partial vacuum in the crankcase which opens the reed valve to suck air/fuel mixture from the carburetor into the crank-case. The end of

this stroke is where we started as combustion occurs at the top of each upward stroke. (Fig. Crankcase Fill and Compression)



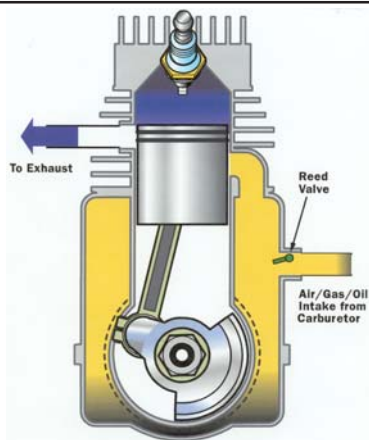
Intake and Exhaust Stroke

The main advantage of a two cycle engine is its simplicity and size as it eliminates the use of mechanical valve trains such as we

have in our four stroke automobiles. This in turn lowers its weight and manufacturing cost. The fact that it has a power stroke in each crankcase revolution allows it to deliver more horsepower than a four-cycle engine of the same displacement.

The main disadvantage is the fuel lost in the process of combustion chamber filling, which results in high emissions and poor horsepower output per gallon of fuel.

The best thing that could ever happen to our aircraft two cycle engines would be a better way to deliver fuel to the combustion chamber but it obviously isn't easy to accomplish or it would have been done by now. As an example, several years ago the motorcycle company Bimota developed a two-cycle engine that utilized direct injection of fuel controlled by digital electronics. The result was to be a very high performance engine that could pass emission



**Crankcase Fill and Compression**

testing and anxious customers placed a lot of pre-production deposits. What happened next was a disaster for Bimota because the introduction announcement came before final testing had proven the concept. As a result the motorcycles named Vdue began going out to customers who quickly found out that the bike had terrible drivability. After the smoke had cleared Bimota bought back all of the production units. After no engineering fix could be found for the direct injection they began refitting the engines with carburetors. That was the end of Bimota's Vdue production.



**Mike McGlothlen's DG 400 and Terry Edmond's DG800**



**Terry Edmond's 2 Toys.**

**Pretty well covers Higher and Faster.**

**Contribute to the APS News  
Stories and photos can be  
emailed to**

**asa\_editor@mindspring.com**

## Competition and Flying News

Rick Howell

### Motorglider Nationals

The ASA board accepted my recommendation that we no longer hold a National Motorglider contest. There was a lively discussion at the SSA convention board meeting where we reviewed the current situation. Unlike the situation years ago the integration of motorgliders into the FAI and Sports class competitions has provided a good alternative to our contest. The Malcolm D. Stevenson Trophy will be presented to the highest placing motorglider at the 18 Meter Nationals.

### 2005 Ely Camp

There will be a fly-in at Ely, NV from 26 June to 2 July. The emphasis will be on fun and learning. Daily weather briefings will be provided by Ely Soaring. There will be tasks (for those who want to fly together), badge and record attempts along with "just for fun" flights. Please register with Rick Howell at [PatRickHOWELL2@earthlink.net](mailto:PatRickHOWELL2@earthlink.net) or phone 972-245-0830. A nominal fee charged by Ely Soaring for services and oxygen.

This camp is open to all types of gliders and their pilots too. The camp is sponsored by the ASA (Aux-powered Sailplane Assoc.), so the tow plane will not be busy. Come join us for the fun. Please read the report from the 2004 Alamogordo Fiesta and plan to come have as great a soaring adventure in Ely in 2005. <http://webpages.charter.net/engreenwell/ASA/>

### ALAMOGORDO FIESTA 2004

The White Sands Soaring Club had a great "first" Fiesta over the Memorial Day holidays. The club felt that late May and early June would provide better soaring than the Turkey Fest that was held for years. They were certainly correct and we have been able to enjoy the great soaring conditions that Jim Day enjoyed at this site.



**Sacramento Mountains east of ALM**





Daily Briefing by Martin Schulz

Hermann Rosing (flying Ron Tabery's "SS") explored the wave east of Sierra Blanca and climbed to 27,255 (21,457 gain). Bernie Gross was towing, but did not want to miss the fun and took the Pawnee to 20,000 ft. in the wave. He was very cold because the Pawnee is quite drafty.

Steve Turner (Mike Anderson's crew) flew with Mark Rose in the club Grob on the 31<sup>st</sup> of May. He flew longer, further, and higher than he had before.... great to see more smiles and hear the stories.

The "Pig Roast" was held at George and Pat Fish's home in Tularosa on the evening of the 31<sup>st</sup>. Great meal, great setting amongst the beautiful huge trees and live music too !!

The real flying began on the 1<sup>st</sup> of June:

- Hermann Rosing completed his first 1000km flight to Taos and return.
- Bernie Gross set a NM State Record....Sports Class out and return to a turnpoint east of Santa Fe on I-25.
- Steve Dee flew his first 500km flight and completed his "Diamonds".
- Paul Bloxham flew his first 500km flight in a DG-300.



Steve Dee preparing for 500k flight

- Martin Schulz put his weather briefing to good use and accomplished "Gold" altitude on his "Gold" and "Diamond" distance flight in the club's Hornet. He also completed his "Gold" badge.
- Hermann, Bernie, and Steven were also trying for the longest duration flight and all were staying up until sunset. Bernie landed @ 20:03:13 followed by Steve about 30 seconds later and finally Hermann at 20:04:30. The sun set @ 20:07:07.

The camp's last day provided more good flights for the early launches. I flew to Taos for the Jim Crisp Memorial. The route was Santa Fe, Durango, Ghost Ranch, and then to Taos. (Total distance 471 miles) I landed just before the crew arrived. Thanks go to Hans Schulze and my wife, Pat for driving the car to Taos.

Bill Daniels flew his Nimbus 2C straight out 510km to Alamosa.

Hermann did it again, another 1000km flight, two days in a row.

**I would like to thank all of the club members who made this event possible, but special thanks to Martin Schulz for briefings, Art Davis, Roger McMakin, Bernie Gross and Scratch Lee for tows and, of course, Dave Reyes for everything else.**

**I wish I could say that this event will continue in 2005, but the club has not been able to find tow planes and pilots to help this year. We do hope to return in the future to enjoy the great hospitality and conditions.**

**Rick Howell (photos Barry van Wickevoort Crommelin & Hans Schulze)**

Participants started arriving on May 23<sup>rd</sup>, but the first few days only provided local flying. The warm-up was good experience for the pilots who had not flown over mountains before. The afternoon of May 29<sup>th</sup> provided wave conditions with many pilots reporting over 20,000 ft. John Bourland had the best flight of the day and completed his "Diamonds" with a climb to 24,000 (18,000 gain). Rick Lewis achieved "Gold" altitude and completed his Gold badge. It was a beautiful sight to see gliders overhead at 20,000 ft as evening approached.

May 30<sup>th</sup> brought the first good X-C flights. 300 km flights were completed. I flew "FD" to Lincoln Station and return. I used my last thermal 60 miles north of ALM at 1630 and then flew in ridge lift until landing after 1900 (sunset 2006).



Listening to Martin



Launch of DX-Chapman/Zivlev

## The Clarity Aloft Headset

Gary Haynes

When I ordered my glider one of the items I had added at the factory was a standard US aviation microphone and headset jack. I also requested a switch on the panel to cutoff the audio on the gooseneck microphone. My thought process was that I would more likely find a good noise cancelling headset at home and would not need to make up an adapter plug to the German DIN connector..



Clarity Aloft Headset

I already owned a Lightspeed ANR headset but realized that I didn't have the head room clearance to make use of it due to the headband size. Years ago when I was flying charter aircraft I had a Plantronics headset which I used. To help on the noise level in piston aircraft I replaced the standard plastic ear tip with an EAR foam earplug in which I bored a small hole almost all of the way through. That took care of the one ear and I used another EAR plug in my other ear. This is what I started flying with when I got my DG in September.

Noise attenuation was pretty good and the radio was readable but not great. Then I saw an article about a new headset design from ClarityAloft. They had taken what I was doing with the Plantronics and made it better. (Both ClarityAloft and Lightspeed have similar units).



Ear Transducer and Foam Ear Plg

The headset has a transducer for each ear. Screwed onto the transducer are various sized foam earplug units. The earplug was adapted from a Clarity Aloft sister company that has been in the hearing assistance arena for a number of years. The unit is very light, wears well on the

several flights have done since I got it, and best of all I now have audio in both ears with good noise attenuation. Maybe not as much reduction as a true ANR but certainly less bulk. The radio is now very clear and I must be lucky or the ships wiring harness is so new that I am not getting much ignition noise.

So if you get in the position of needing a replacement headset check out their website at [www.clarityaloft.com](http://www.clarityaloft.com).

## MODIFICATION OF DG AIRCRAFT WIRING FOR NOISE CANCELLING HEADSETS

Terry Edmonds

By coincidence I came across the Clarity Aloft headset Gary mentions at the EAA Oshkosh air show last summer and bought a set for my DG-800B. They are small, light, comfortable and do not interfere with headroom. The only down side I notice is they are a bit tedious to get the earplugs inserted properly. This is not a problem on the ground before the flight as it only takes a minute or two but on an airstart can be distracting. Normally when doing an airstart radio communications is not required so I just carry a cheap hearing protector that pops into the ears quickly.

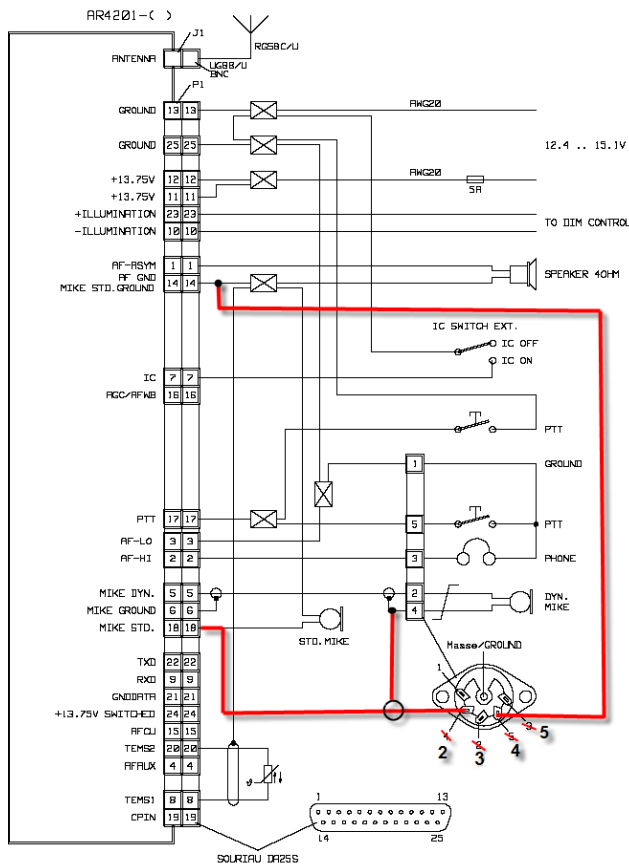
The stock radio setup in DG self-launchers is a dynamic gooseneck microphone and a separate headphone. The dynamic gooseneck microphone is well accepted by glider pilots but it is not noise canceling so does not work so well when the engine is running. We often hear of pilots complaining they cannot communicate well when flying under power. The Clarity Aloft headset as well as most other headsets in the USA uses an electret condenser noise canceling microphone element. Condenser microphones require a dc bias voltage to operate. Aircraft radio manufactures have provided an input for this kind of microphone with supplied bias voltage commonly referred to as standard microphone input. The modifications I am describing here use the "standard" microphone input with an electret noise canceling microphone and will solve the communications problem provided there isn't any ignition noise ingress to the radio which is not addressed in this article.

Gary was well aware of the problem when he ordered his DG-808B and had the factory install the modification. The rest of us who have stock aircraft have to install this in the field. I have done this mod in both a DG-400 with a Dittel FSG 71M radio and in a DG-800B with a Becker AR 4201 radio and the procedure was similar. Most aircraft communications radios have inputs for both dynamic and standard microphones so should be adaptable. I will outline the modification steps here in the DG-800B/Becker combination. This modification of wiring constitutes an

## (Microphone Cont.)

alteration of the aircraft and as such the work must be performed and signed off according to applicable FAA regulations.

The attached Becker typical interwiring diagram is close to the stock DG wiring but not quite the same. The diagram shows the round 5 pin DIN connector that is mounted behind the seat in the DG-800B but the pin numbering is different so you must be aware of that in doing the job. In order to use a standard headset in DG self-launchers it is necessary to add some wiring. The colored lines on the diagram show the additions. I chose to rewire the DIN connector for the standard microphone headset but you could add phone jacks to match what comes on stock headsets without changing the DIN. The phone plugs are a little bulky and I like to save space in the cockpit wherever I can.



The materials you will need are:

- 22 gauge, 2 conductor Teflon insulated shielded cable (available from Wings & Wheels).
- Subminiature toggle switch.
- DIN male 5 pin connector (Switchcraft # 12CL5M available from Allied Electronics).
- Solder.
- Heat shrink tubing.
- Soldering and small hand tools.

1. Start by pulling in the new microphone cable. There is a plastic conduit that goes from the compartment under the master switch to behind the O2 bottle sleeve. Remove the fiberglass sleeve for better access to the rear compartment. It takes a little time but a pull wire can be pushed through this conduit which makes for a neater installation than wiring outside of the conduit.
2. Fasten the new cable with wire ties to the existing wiring on the path from the radio to the connector/speaker panel behind the seat.
3. Remove the radio and disassemble the D connector on the harness. Solder the new insulated wires to pins 14 and 18. There should not be any existing wires on these pins. Do not connect the shield here but cover the end with some heat shrink tubing to insure it does not short out on anything. Reinstall the radio.
4. Remove the panel behind the seat with the 5 pin female DIN connector and speaker. Cut some of the wire ties to get better access.
5. Remove and discard the wires from pins 2 & 4 of the DIN connector that go to the printed circuit board. These wires were for a dynamic microphone in a headset which we won't be using here and the pins need to be reused for the new standard microphone.
6. Solder the insulated wire from the radio D connector pin 18 to the DIN connector pin 2. Solder the insulated wire from the radio D connector pin 14 to the DIN connector pin 4. Solder the shield of the new cable to the shield on the cable coming from the gooseneck microphone.
7. Reinstall the panel and any wire ties that were cut.
8. You will need to wire a matching 5 pin DIN male connector to your new headset. You can either take the connector off the headphone that came with the aircraft or find a new connector at an electronics store. The pin connections are 2 & 4 for the microphone, 3 & 4 for the earphone and pin 1 for the shield.



9. There is one other step of installing an on/off switch on the gooseneck microphone. This is necessary because if the gooseneck microphone is on during powered flight the noise canceling effect does not work. I found enough space in the head of the Becker gooseneck microphone to mount a subminiature toggle switch (see photo). This is a handy place as no additional wiring is needed by just installing the switch in series of one of the



## (Microphone Cont.)

microphone wires in the head. I also like it here from an operational point of view.

In operation you turn off the gooseneck microphone during powered flight. In gliding flight you probably will take off the headset and use the gooseneck as we are glider pilots and don't really like to wear headsets. Don't forget to turn the gooseneck switch back on or no one will hear you.

## Overheating - Trouble Shooting a Pump Problem

Jim Herd

The symptom was overheating while taxiing to run up at fast idle (about 3000 rpm). Temperature rose above "red line" and the DEI LCD began to flash. I turned it off at 110 degrees C. I jumped out to check things over. There was no boiling or fluid loss, and the radiator was totally cold. The fluid level was only slightly lower than the cap – maybe one inch. There seemed to be no leak. I returned to the ramp and scratched my head.

The first check was to turn ON the ignition and press the fuel pump test button. This stops the "clackety clack" of the fuel pump so you can hear the quiet purr of the water pump. Sure enough, it was purring! With extensive help from Steve Eddy and John Morgan (a lowly ASH26E driver!), we attempted unsuccessfully to check flow rate based on the instructions in the Service Info noted in my previous post. We then tried a whole series of brilliant experiments to check flow rate and force any air out of the system. No luck. And the polarity of the pump wiring can not be reversed on my plane – because the spade terminals are polarized by male/female ends – so that was not the culprit either.

So, we removed the water pump on the theory that the impeller must be bad, even though we could hear the purr of the motor we never heard a nice consistent water flow. The unit sits right in front of the engine on the firewall and it comes out quite easily – 2 wires and 4 hose clamps. The impeller looked brand new! And by the way, this is an impressive unit, technically speaking. We then proceeded to try to make the pump do its stuff by wiring it directly to a battery and adding a short hose that was dunked in a bucket of water. This did absolutely nothing – except prove that this is NOT a self-priming pump!

So we set about priming the pump and trying again. This is actually far more difficult than it might seem – the slightest air bubble or break in flow will cavitate the pump and stop the flow. Hmmm – therein lies a clue! If it is so hard to avoid an air lock in such controlled conditions, it is surely easy to get an air lock in the aircraft. And then very difficult to get rid of it!

By the way, the Service Info bulletin has a spec of 0.2 litres in 15 to 20 seconds. We found it very difficult to get any consistent flow from the pump as we tested flow rate – presumably due to air infiltration. When we eventually achieved a good flow, with the pump in our hands connected to a hose in a bucket (properly primed), the flow rate was far in excess of 0.2 litres in 15 seconds! It was about the same as the flow from a regular garden hose – probably an order of magnitude more than the spec. We also questioned whether 0.2 litres in 15 seconds would be adequate for cooling. Plus, normal restrictions in the cooling system would surely not reduce the flow that drastically?

Finally, we returned to the Maintenance Manual and resolved to strictly follow the instructions for removing air locks. The problem was that all the experiments had left the water system partially full of plain water. (It is very hard to get ALL fluid out!) We did our best to open hoses and blow it all out, then refilled with roughly the correct mix of coolant. We also checked all hose clamps.

After filling the radiator to the top and running the pump for 1 minute, the next step is to top off (just a spoon full) and install the pressure cap. Then start the engine and warm it up. Then run at full throttle on the ground for 30 seconds. Sure enough, the CHT was coming up as normal, and the radiator was getting hot! Yahoo! We added another spoonful of fluid. A flight test confirmed proper CHT and EGT and engine power!

So, what happened? Since we never found anything "wrong", and could not replicate a problem, we concluded that the cause must have been an air lock. Especially since everything we did confirmed that it is extremely difficult to avoid an air lock when conducting experiments on the ground. That pump is extremely sensitive to air locks! So why, after 75 trouble-free hours on the engine, did it suddenly air lock? Well, immediately prior to this event, I had just returned from a soaring trip to Arizona. The plane performed great in Arizona, and that was followed by an 800 mile return ride in the trailer – over some rough roads with a bunch of steep climbs and descents (we returned via Death Valley). So, the shaking, the ups and downs, and the extreme altitude changes could have contributed to an air bubble migrating from the top of the radiator (laid sideways) to the pump, or maybe it was lurking in the hose close by. The darn thing just needed burping!

And there is more.

My pressure cap had a safety wire attached – to eliminate the possibility of the cap vibrating off. However, this also discourages the regular inspection of water level. I figured this was no big deal because the level had always stayed high and there was never any sign of a leak or overflow out of the cap. It seems that a slightly low fluid level in the radiator may lead to a very serious air lock! So I have removed the safety wire and I will check the level very frequently, and top it off even if it only needs a spoon full.

In summary, here are the messages for you-all:

1. Our cooling system is actually very simple and quite robust. Just don't let that pump see any air!
2. Watch the DEI for CHT problems – especially within the first 5 minutes of run time.
3. Inspect the fluid level VERY frequently, and keep it absolutely full.
4. Do NOT add safety wire on the pressure cap. It is not recommended by the factory, and I have never heard of one coming off. (Have you?)
5. The factory instructions for bleeding air are really simple – just follow them exactly if you suspect an air lock.
6. Don't try exotic methods to troubleshoot. It is very hard to do experiments with precision, and it seems it is totally unnecessary.



**Jeff Banks' AC5M north of Windy Pass  
(halfway between Anchorage and Fairbanks, AK.  
Photo by Ron Stapleton and shot from Cessna 170B flown by  
Pete Brown, Jeff's partner in the AC5M.**

## **News from Oliver Dyer- Bennet's Motorglider Service Center Calistoga, California**

After twenty five years with Glaser-Dirks/DG and over 400 DG's sold and resold in the USA, seventy-two since the reorganization of DG Flugzeugbau eight years ago, we are moving on to a new relationship with AMS Flight.

We will continue our 1st class factory authorized service center for the entire DG product line, from the DG-100s to the DG-808B's. We have a full time service technician, Mark Wolfe, on staff, a part time A&P and a part time IA to attend to your DG service needs.



**Mark and Oliver**

Right now in the shop we have a DG-303, DG-400, DG-800A, DG808B, DG-1000S, and two AMS Flight/Carats, that we are completing winter service on. As well as full DG product service we will also continue to work with the USA/DG customers on technical questions and parts for the entire product line.

With about ten Carats already in the USA, we expect ten more to arrive before the end of the year. Our service and instruction facility is humming. AMS Flight is in full serial production with the Discus - winged Carat. The 25th Carat is in the laminating stage and is expected to be ready to leave AMS Flight in May, 2005.

For the future, AMS Flight, who has built over 1,000 sailplanes for DG, has some very interesting product lines on the drawing board. Perhaps a low cost LS6M/18, as well as a new version of the LS4, with winglets, finished in weather resistant polyurethane paint. For our DG & AMS customers we will continue our dedicated product support and factory level service, including introducing exciting new products from AMS Flight.

Submitted by:  
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## FAA Releases AD for DG-800 series

The FAA has released a new AD for DG-800B. It is effective on June 6, 2005 and involves:

- Modify the coolant pump and fuel pump electrical circuits;
- Remove the non-resettable digital engine indicator (DEI) circuit breaker (4-ampere) and replace with a resettable 5-ampere circuit breaker;
- Secure the choke butterfly valve axis that is on the SOLO 2625 engine (new version Mikuni carburetor);
- Install edge protection at the sharp edges of the resettable 5-ampere DEI circuit breaker; and
- Incorporate “Flight Manual” changes that are listed in the service information.

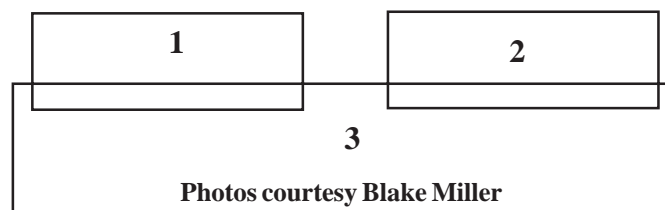
Compliance period - Within the next 50 hours time-in-service (TIS) after June 6, 2005 (the effective date of this AD), unless already done.

Check the DG web site. The TN is 873/26 or 873/27. They list the serial numbers that may be affected. Generally any serial number after 219 should already be in compliance.

The original Technical note was released by DG in 2001 and many ships may have had the changes made in accordance with the TN.

In talking with Oliver Dyer-Bennet the estimated labor charge should be in the 5-6 hour range. The largest expense will be for the upgrade to the DEI. The unit needs to go to DG in Germany. Shipping will be approximately \$200 round trip and the cost of the upgrade is \$335 for ships with one fuel pump and \$264 for ships with two fuel pumps per Chris Klix from Pacific AeroSports. One way to save on the shipping would be for several owners to co-ordinate shipment so that the units could ship together.

The largest headache for an owner will be the downtime while all of the service is being done. With about 4 weeks total time for the DEI to be shipped, updated and returned that seriously impacts flying time during the peak soaring season.



- 1 - Blake Miller ready to self launch in his Silent IN**
- 2. First Landing**
- 3. On the go.**

Photos taken during Blake Miller's first flight in his new Silent IN - Serial # 15. Blake reports a 200-400fpm climb rate with the 12m ship. Excellent thermaling characteristics and a 400# gross weight. Watch for a future article on the Silent IN.



**The San Juan Mountains west of Durango, CO**  
**Photo Jim McCann - Super Ximango**



#### 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.

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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.

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Dave McConeghey ATP CFI-Glider Self Launch  
Endorsement Kansas 316-409-9624  
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Dave McConeghey 316-409-9624  
Photos <<http://members.cox.net/motorglider>>

### PIK-20E

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

### DG-808B

2002, SN 8-248B, TTAV 12, 15-18 meter wings with winglets, leather interior, Cobra trailer, One man assembly, full instruments with transponder, IPAQ, O2, Fully Loaded DG & always hangared. Price \$125,000 US (FL)  
Russel Steiner 954-630-8574 or <[russ1085@bellsouth.net](mailto:russ1085@bellsouth.net)>

### 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)>



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