Auxiliary-powered Sailplane Association

Published Bi-Monthly by ASA Inc.- Stan Nelson, President - Bruce Templeton, Vice President - Issue #53 Vol.VIII

NOVEMBER-DECEMBER 1996 NEWSLETTER

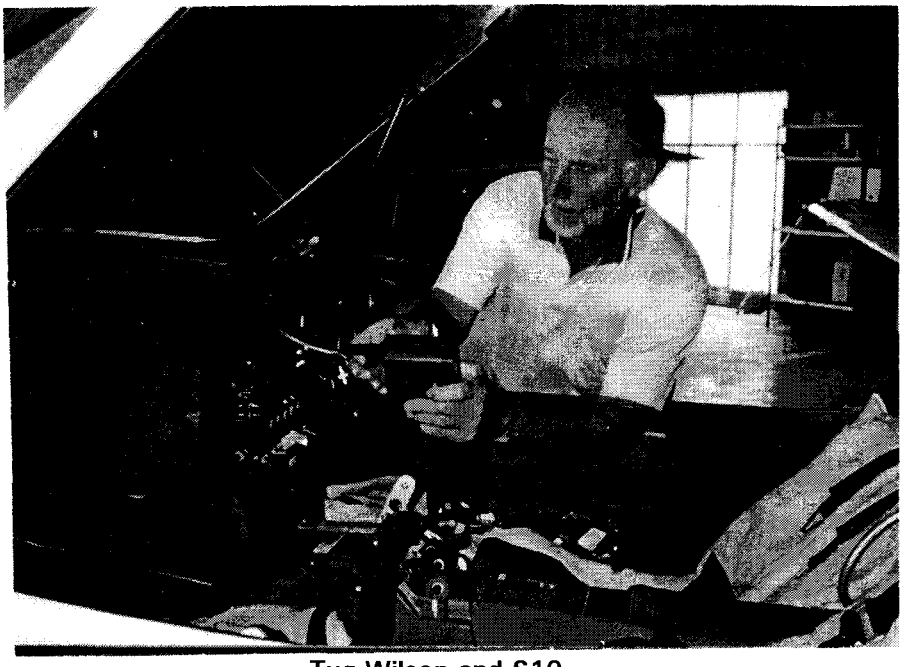
A note from the editor

The following interview with Tug Wilson provides an insight to the enjoyment of flying self-launchers. In particular, I suggest we all listen carefully to his comments on safe flying.

Soaring the Stemme S10 in Spain

An interview of Tug Wilson by Marc Arnold.

In June 1994, Marc Arnold and Tug Wilson soared for five days in Allicante, Spain in the Stemme S-10 Chrysalis. The following interview was conducted for the benefit of those having an interest in cross country soaring.



Tug Wilson and S10

Marc:
Before we get into the details of cross country soaring in a motorglider, perhaps we could begin, Tug, by your telling me something about your background in aviation, and soaring in particular.

Tug:
Welcome to Spain, Marc. I must say that I have thoroughly enjoyed the five days we've had together. I have to start by putting you right on terminology in that in my book, the Stemme S10 is such a superb machine. It should never ever be called, what I regard as a derogatory term in the soaring movement, a "motorglider". "Motorglider" to me refers to an aircraft like the Diamona and the Grob, fixed propeller on the front and a fixed undercarriage. Machines like the original PIK-20. the DG400, the Stemme and all of the other that are coming along are foremost sailplanes, so they are part of the world's sailplane movement, and should not be referred to as "motorgliders".

Having said that, my background in flying first of all has been 20 years in the Royal Air Force in England. During that time I was Chief flying instructor with three soaring clubs in the UK, and flew 15 British National and United Kingdom two seat records in the hot ship of those times, the Blanik. After 20 years in The Air Force, they began to confine me to a desk as a desk test pilot, and that did not thrill me too much, so I left the Air Force to join Cathy Pacific in Hong Kong. I had 18 wonderful years there and during that time, was able to continue soaring in Hong Kong in a PIK-20 which became available through the fine officers of Erie Avion in Finland. I flew the PIK-20 over the period of about 7 years in Hong Kong for over 2,000 hours and went on a number of Cathay sponsored flights for the company which was a wonderful opportunity.

I did the first ever soaring flight the whole length of Japan, from Kagashima to Shaporo. This was so well received by the company public relations people that they asked me to go to Australia. So I went down there at high speed and soared from Sidney to Perth and when I got there I had such a good offer for the aircraft, I sold it in Australia and used the money straight away to buy the next generation, which was the DG400. I flew that over the next 5 years or so, quite a lot in California. While there, I did a soaring flight from the Mexican border in San Diego up the

Sierra Nevada and Cascades up to Vancouver and then back to San Diego again.

I retired from Cathay Pacific two and a half years ago, bought the Stemme S10 and now have to say that I am going through the happiest phase of my life, because the S10 combined with this situation here in Spain is an utopian existence for me.

Marc:
In addition to your time in the PIK-20 and DG400 have you had the occasion to fly other self launched or pure sailplanes and how many hours have you amassed?

Tug:
Yes I have flown at various times just about every sailplane or every other sailplane that has been available to the general market. Among the hot ships, the only one I have not flown currently is the Nimbus 4. Competition flying I did in the UK, I flew the world championships in Benalla Australia in a Ventus, so I have had a reasonable cross section of flight in a wide variety of sailplanes.

Marc:
I would imagine in the course of these different types of airplanes you have, all told, amassed quite a few hours.

Tug:
Yes, I've logged 17,000 hours total time. My total soaring time is 6,400 hours.

Marc:
And you've been flying the S10 for about two and a half years, Is that correct?

Tug:
Yes, I've had the S10 here in Spain for exactly 2 1/2 years. In that period I have amassed a grand total of 38 engine running time and 1,080 hours soaring time.

Marc:
And I'm happy to say that the last 22 were time that I had a chance to soar along side of you. What is the arrangement here and how do you describe this opportunity for people to take a soaring holiday?

Tug:
Really, what I have set up here is an utopian existence, because I decided quite early what I wanted for myself in retirement was a side-by-side high performance self launching sailplane. The only aircraft that fits that bill, at this time, is the Stemme S10. There are others which are high performance tandem, with pop-up engines, which I don't care for too much.

I flew many thousands of hours in the PIK-20 and the DG400, but for me the superb arrangement with the S10 is absolutely idyllic, and considering the S10 is a totally new concept, it has performed for me here, absolutely wonderfully. What I decided was that in retirement, I wanted to carry on soaring. Like all soaring pilots, I've had countless hours of absolute exhilaration in sailplanes, and I thought how nice it would be in retirement to be able to share these experiences with other people. We have all heard soaring pilots screaming of the radio and for a solo pilot that is their only release - howling into the radio what wonderful things are happening to them. But now, with the new generation of high performance dual aircraft, it is possible to go and share these experiences together. And for me to share it in the side-by-side configuration is absolutely superb.

Marc:
What kind of soaring conditions exist here in Spain and when do they occur through out the year?

Tug:
Conditions are excellent. There is every aspect of soaring in the local area. Excellent thermals; excellent wave; hundreds of miles of ridge; and the best sea breeze front conditions I have ever seen in my life. The weather here is soarable all throughout the year. I discourage people from coming here in July and August because it is very hot and the Lavante Marina sea breeze comes in from the Mediterranean. This precludes soaring until you are about 100 miles inland, so during those two months I siesta in the mornings and play golf in the afternoon. For the rest of the year, the best seasons are the Spring and Autumn, but even during the Winter, there are good thermal conditions, and excellent wave, so it is really an all year around site.

Marc:
You make it sound as though you only play golf in the off season, and from what I've seen your handicap does not suffer too much during the rest of the year. What is the normal soaring schedule when people come here to soar with you?

Tug:
Normally, it's 18 holes of golf in the morning and take off at about 2:00 in the afternoon. During the winter month of December and January we will be landing after 3 to 3 1/2 hours -- at 5 or 5:30. During the summer months it is possible to be soaring up until 10:00 at night, so the is no shortage of flying time for people that come here to fly.

Marc:
Starting that late in the afternoon, how long does it take you to rig the airplane, prepare it for flight and then at the end of the day to pack it up and put it away?

Tug:
Well as you will have seen for yourself, this is one of the things that astonishes people form the soaring world, because my villa here is about 50 yards from the hanger. And when we go to the hanger and open the doors, we are airborne within 10 minutes of arriving at the hanger. At the end of the day having flown anything up to a thousand kilometers, you are walking away from the hanger within 10 minutes of landing, with the exception of if it's been a very good day there is another 10 minutes of debugging the wings.

Marc:
How much experience does a pilot have to enjoy their time here soaring with you?

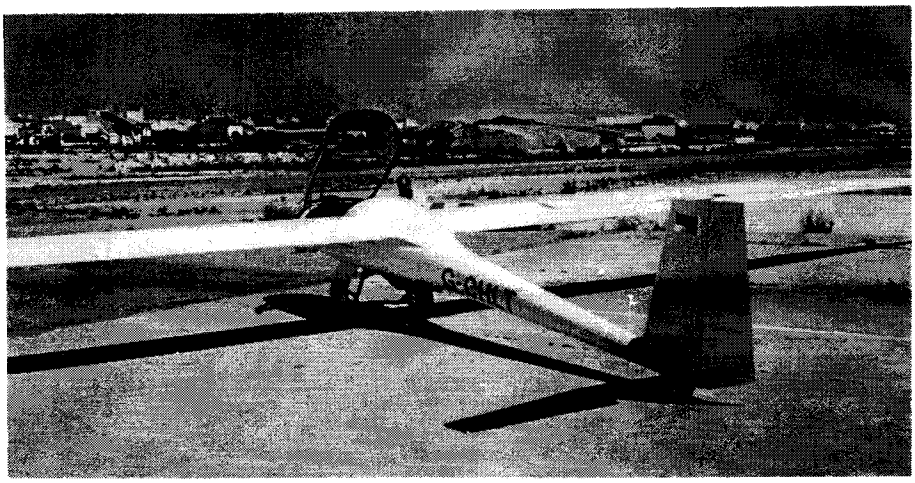
Tug:
It really doesn't matter here Marc, because no licenses are required, no medicals, no formalities, no club joining fee or any of that. I always do the takeoff and landing. The moment we are airborne with the undercarriage up, whoever is with me does all of the flying. I just talk them through and demonstrate as necessary or as requested. The experience level truly doesn't matter, because the S10 is such a wonderfully docile aircraft to fly. No nasty wing drops or anything like that, so it is well suited to anyone who comes along, from those just wanting joy ride to competition pilots. And of course, it is an absolutely unique opportunity, because the problem with soaring in general is one of instructional cross country flying.

Learning cross country flying in almost every country in the world is almost a do it yourself exercise. And it takes a long time, because you learn from your mistakes. To be able to come here and have the opportunity to do cross country flying every day is not the sort of opportunity that exists in most other places. The instruction is tailored to the experience of the person. Everyone has plenty to learn, whether they just started cress country flying, or whether they are serious competition pilots.

Marc:
What are the accommodations for your guests that come here?

Tug:
We have an apartment 5 minutes walking time from the airstrip. It's a two bedroom apartment with bathroom and sitting room, and satellite television which covers just about every language. Associated with the apartment block is a very large swimming pool with a child paddling pool beside it. All set very nicely in gardens. People come out here on holidays, normally from the UK and stay in that apartment. It seems to work best for people who come out as a foursome. That way, when one of the pilots is flying, three go out and sightsee locally as opposed to leaving only one person behind. Although it works well both ways when there are just two, the non flying partner usually just enjoys the pool in the afternoon.

Marc:
Can you tell us about some of your more interesting flights in the S10 - Any particularly long ones or travel throughout Europe with the S10 and in general what kinds of experiences have you had with your S10?



Tug's S10 at Allicante, Spain

Tug:
I say its two and a half years soaring time and just over 1000 hours. During that time I soared to the factory in Berlin, and back here to Spain. I soared both ways, taking three days one way and four the other. Kay and I also had a week in the Swiss Alps, flying out of Fianous. We also soared there and back. The rest of the time we have been here at Quesada, because the flying conditions are so good, and we enjoy the situation here so much. It's a bit hard to go and find anywhere else that we are going to be as happy.

Mostly, I fly with people who come on soaring holidays. A normal week's holiday would include 15 to 30 hours soaring time. We don't stay in the circuit at all, so all the flying is cross country soaring time. Since we average a speed of about 80 km/hr and I've flown a thousand hours, that's one hell of a lot of kilometers. It works out to about 30,000 km/year

which I think is a healthy average.

Marc:
Having several thousand hours in the PIK-20 and DG400 and now over 1000 hours in the S10, the concept of the S10 deploying it's propeller in lieu of deploying the engine, what difference does that make operationally, and how does that influence some of your flying decisions?

Tug:
Yes, a very good question. First of all, I always fly self launching sailplanes as a sailplane. That's to say, the moment I press the button to start the engine, I've already selected a field in which to land. In all the thousands, literally thousands of engine airborne restarts that I have done in the PIK-20 the DG400 and the S10, I have only one occasion when the engine didn't start, and that was purely and simply because of the choke. It was my very first flight in the DG400 in anticyclonic conditions in Germany. I needed to use the choke to start the engine, but my fingers were too slippery over a very stiff choke knob, so I could not get it pulled out. But again, I had chosen my field, I just simply landed in it with the engine up. It was a parachuting field and to the astonishment of the people there, I just started the engine up and took off again. So I guess they must have been a bit surprised.

The advantage of the S10 is the obvious one of course, is that the glide angle does not change in the event of having to land because the engine does not start. The approach remains exactly the same as the straight soaring mode. Whereas with the pop-up concept, the glide angle is just about cut in half, so it frequently happens on the pop-up concept, that people who are having trouble starting their engines, frequently undershoot their field, because they did not plan for the considerable drag of the engine. When it does not start, there is not enough time to go through all the proper alignments to retract the engine, so it is strongly recommended with the pop-up engine that you devote all of your time to circuit planning and landing. That circuit has to be with a steep glide angle of somewhere between 15 and 25 to one which is not the easiest thing for people to judge after flying around at a 40 to one glide angle.

The other big plus for the S10, of course, is the four stroke engine for those who want to use it both as a light aircraft and a sailplane. This is not of much concern to me, because I only use my engine to get airborne for the day's soaring and I don't motor anywhere.

So the dual advantages of the unchanged glide angle in the event of a landing without engine, plus the cruising advantage are absolutely enormous.

Marc:
I know you are much more comfortable thinking of the S10 as a high performance sailplane. Would you contrast its handling characteristics with other long winged ships, and tell us anything that might occur to you about its performance and handling?

Tug:
The thing I was very, very pleasantly surprised about, right from the very outset with the S10 was its roll rate. Typically, when you go for high span, it is at the cost of handling and roll rate. No one would pretend that a 20 meter plush ship would handle as well on a ridge as a 15 meter ship. There is absolutely no way that can happen. For a sailplane pilot, when you first see the S10 on the ground, one gets the impression of size, because the cockpit is high and the undercarriage is long and gangly, and you just think "big". And once you start thinking big, you think that thing has got to be quite cumbersome in the air. But I have to say the S10 is an absolute delight to fly. It soars incredibly bell at both +10 degree and +5 degree flap. has a very good glide angle and has a roll harmonization of controls for a ship of 23 meters is absolutely excellent, and I am comparing that with all ships. I've flown everything on the market that is 20 meters, the only one I have not flown to date is the Nimbus 4. The S10 compares very, very favorable with all the others.

Marc:
Does the Stemme's engine deployment concept change your strategy in terms of minimum altitude or is that pretty much equivalent with the pop-up design?

Tug:
I'm always very wary of saying to people that it is possible to start the engine at a very low altitude. All the safety seminars in the UK and America go for what are quite high altitudes for air starting. Sometimes 1,000 ft AGL, sometimes 1,500 ft AGL. I've even seen someone advocate 2,000 ft AGL. It's a point that varies according to the day, the wind conditions, the experience of the pilot and not least of which the field or airstrip you are over.

For instance, if you are circling tight at the end of a 2,000 ft airstrip, then you can restart the engine at a very much lower altitude. In the case of the S10, it only takes 4 seconds to start the engine so it is possible to demonstrate an engine start and go around with the gear down while in the landing flair without touching the wheels. I'm not for one second propounding this as a cross country technique -- it isn't. I'm just saying it is possible. Undoubtedly with the unique propulsion system of the S10, it is a more viable option to come to a lower altitude than with the pop-up motor concept.

Marc:
You have had pilots come here from many different areas, and with different background levels. What do you find most enjoyable about the soaring experience they have from an education point of view? What aspects do they most frequently comment on?

Tug:
One of the most enjoyable things for me is seeing the enormous joy people get from flying here in the S10. Pilots from pretty miserable soaring conditions elsewhere enjoy the soaring conditions here is Spain enormously. Their experience level really doesn't matter, because if they have only done a little soaring, the benefit from learning the basics of cross country flying. If they are very experienced competition pilots, they have the opportunity to discuss and improve as they go round. It is an opportunity for people to improve their cross country flying ar any level.

If fact, last year I had a doctor from the UK that had flown regional competition in the UK for many years, and had always finished in the middle of the field. He had two weeks out here in the S10 and went back, and in the very next week, won the regional championship. When he had to give his piece about "how I did it", he said "It's very easy, if you want to win the regional competition, go and take a couple of weeks with Tug in Spain".

Marc:
Well, I know that for myself the last 22 hours in the air have been the best possible classroom situation, because instead of just discussing theory, it's a chance to actually see it in use and hone those skills. For anyone interested in coming and visiting you here, what phone number or fax number would they use to reach you?

Tug:
Anyone wanting to come can either phone or fax -- we have a dual purpose machine here, and just simply use the international out code from whichever country you're in and then dial 34-6-671916.

Marc:
Well Tug thanks to you and Kay for your wonderful hospitality, and again it was a marvelous experience, and I hope many others have the opportunity to enjoy it.

Marc Arnold
St. Louis, Missouri, USA
(314) 721-5904

(Editor's comment)

Regarding the increased drag of the pop-up engine extended --- If the engine doesn't start, and the prop is windmilling, stop it since a windmilling prop has a much greater drag than a stationary one. And you might want to lower the engine without the prop centered. Damage to the prop or the compartment doors could be much less than a short landing. I had an engine failure and the prop couldn't rotate to be centered. With the engine lowered to just clear the doors, the drag was almost negligible. In addition, in the event of a real problem on landing with a sudden stop, the lowered engine is much less likely to slam forward. Remember - as Tug says - first priority is to fly the plane and concentrate of the approach and landing.

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A message from the President

The 1997 National Convention takes place from January 30 to February 1, 1997. The convention site is the Arlington Convention Center, Arlington, Texas, only twenty minutes from the Dallas/Ft. Worth airport (DFW). The Convention Committee is chaired by Marion Griffith, 214-247-7069. Registration is at SSA Headquarters, Hobbs NM. 505-392-8154. Hotel reservations can be made at the Arlington Marriott, 1-800-442-7275. There are several activities of interest to Auxiliary-powered Sailplane enthusiasts. I hope to see you there.

The SSA leadership is following through on their agreement to examine the possible integration of auxiliary-powered sailplanes into the existing FAI classes. We have read in"Sailplane Racing News" that the 18 meter class in Germany this past June ran an integrated class. I am in receipt of the German 18 meter class rules and I am having them translated at this time. The ASA will be calling on its members for input than can assist us in providing data to the SSA that will result in the framework required to simplify the process. First, we must focus on the philosophy and policy of integration and how it will benefit soaring as a whole. ----- Stay tuned.

MOTORGLIDER TRAINING

Seminole Lake Gliderport located only 30 miles West of Orlando, Florida has added a Grob G103 SL (standard airworthiness) to its fleet for motorglider and cross-country training. This motorglider has power similar to a lot of self-launchers and will give pilots realistic training for transitioning to self-launchers. A training syllabus according to Advisory Circular 61-94 has been developed. For glider pilots with a power rating the motorglider sign off is approximately $300; with no power experience

approx. $500. For additional information, please contact Knut at (352) 394-5450 or e-mail - soarfl@aol.com. Address: P.O. Box 120548 Clermont, FL. 34712

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SSA 1997 CONVENTION EVENTS

Friday, January 31
0900-1000
Auxiliary-powered Sailplane Panel
Tilo Holighaus, Gerhard Waibel, Wilhelm Dirks
1100-1145
Wilhelm Dirks, DG-800B and other developments

Saturday, February 1
0700-0845
Auxiliary-powered Sailplane Association Breakfast
Guest Speaker: Tilo Holighaus
0845-0915
Auxiliary-powered Sailplane Association Membership Meeting
To be determined
Auxiliary-powered Sailplane association Board Meeting

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. . . . . **FOR SALE**

DG-400 SN:4-68 1984, TT 470 hrs. engine 69 hrs.

Tinted Canopy	Raber barograph
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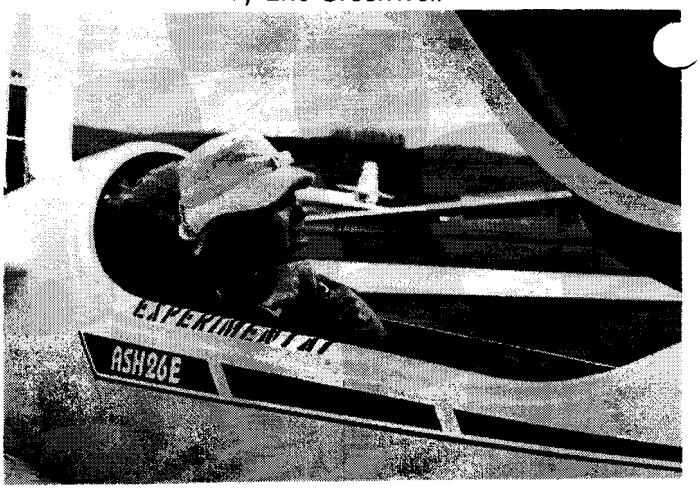
SSA INSURANCE PROGRAM ANNOUNCEMENT

Costello Insurance Associates, Inc. of Tempe, AZ has been authorized by the SSA Directors as the exclusive Broker-of Record and Insurance Administrator for the SSA program through December 31, 1999. This exceptionally strong alliance between COMAV, SAFECO, Costello and the SSA allows the Group Program to offer a superior variety of glider insurance packages. The new program offers a significant rate reduction for motorgliders with rates comparable to standard and experimental gliders. For more information, contact Costello Insurance Associates at 800-528-6483.

Submitted by;
David Volkman, SSA Insurance Committee Chairman.

MOTORGLIDERS = OPPORTUNITY
by Eric Greenwell



I've leaned some things since getting my motorglider in March of last year. One of the most interesting thing is how people that aren't motorglider pilots have a very limited concept of what a motorglider can provide.

"Opportunity" is the key word.

Everyone understands a few things, most of all what I call "tow plane avoidance". The ability to self-launch gives you the opportunity to launch when you are ready, thereby avoiding the wait for a tow plane and the delay caused by all those other people in front of you. This part everyone envies.

Secondly, everyone easily grasps the idea of "retrieve avoidance", using the motor to avoid landing out.. Most people like the idea, though some don't, believing the chance of landing out is what defines the sport.

Indeed, self-launch and self-retrieve are important, but these abilities don't really allow a change in the way you soar, but allow you to do it more conveniently or more often. After all, a typical weekend flyer at Euphrata has little trouble getting a tow, avoiding landouts, or getting a friend or tow plane to retrieve them once or twice a year. Not so obvious is that a motorglider allows you to enhance your soaring. This is what is really important to me. Most glider pilots don't realize how much their self-imposed constraints limit their soaring. The biggest constraint is probably the desire to soar home. Once you realize you lo longer have to soar home, your soaring opportunities increase immensely. Here are some examples:

1) I stay hours longer in the great soaring in the mountains, while plain gliders scoot for home before the thermals die in the basin.

2) I fly in low cloud base, marginal, but exhilarating conditions when no one else will bother

launching, because the lift is too unpredictable.

3) Sometimes I fly like it's a record attempt, speed ring way up and ruthlessly rejecting all but the very best thermals. Good practice, and the palms still get sweaty!

4) The soaring is dying between me and home? I keep going towards the still good air knowing I can motor home if I need to.

5) Miss the wave on the first try? Instead of dashing back to the airport, I try another place, and another, until I get it right.

Let me expand on two of these situations last summer.

One day in Ionia Michigan. the cu started early, but only to a two thousand feet AGL base. None of the locals launched when I did, preferring to wait for the bases to rise. The lift was less than one knot, but the seemed to be no sink, and every cloud worked. Gently dolphining from one puffy to puffy, I stayed between 1500' and 2000' AGL as I covered about 70 miles in the first two hours. How different from our usual flying! I flew a four hour, 150 mile cross-country in these odd conditions, and never required the motor. Without it, I would have flown locally, but not gone cross-country. The locals never did fly because the bases didn't rise until too late in the day.

In mid-August, happy cu over Hermiston encouraged me to head south. The other pilots went north, fearing the Hermiston basin would, as usual, die by mid-afternoon, cutting off their return to Richland. I was certain they were right, but with my ticket home nestled behind the wing, I went past Heppner then pushed well into the mountains. The bases rose, the lift increased, streets appeared, and best of all, I was flying in new territory. What a rush! Late in the day, I turned back with John Day, Oregon in sight. The clouds ended before Pendleton, Hermiston was a pit, but with slow, careful climbs (and 50:1 glides), I inched my way across Hermiston and the Columbia River. Once again I managed to get home without the motor.

Sometimes I do have to use the motor to get home. Most of the time, I discover there is more lift out there than we realize. Because a retrieve or landout is so inconvenient, most glider pilots play it safe by heading back early, or by not going there in the first place. We take pride in getting back, and don't think of all the soaring we missed. Why else is the first question a motor glider pilot is asked after his flight is "Did you use the motor?", instead of "How was the soaring?".

It astounds me that many glider pilots, even some motorglider pilots, consider it a "failure" if the motor is used after launch. A record attempt will fail if the motor is used, but nor a recreational flight. Most of my post-launch motor use is anticipated hours before it happens. I frequently, consciously, make soaring decisions that will almost surely require the motor to return home. Why? So I can do more and better soaring! Read the examples again, and consider this: would you make different soaring decisions if every airport, duster strip, and yes, even every cut hayfield, had a tow plane and pilot, eagerly waiting to tow you home for a buck?

I sure have.

Editor's Comment

Please, however, always have a safe landing site available if that wonderful engine doesn't start!

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PROPELLER BOLTS SHEARED

Bill Nutting reports that while climbing through 1000' AGL, his DG400 engine began to vibrate badly. Reducing power to idle helped somewhat but after increasing the power to 3000 rpm, he heard a "bang" as the propeller flew off the hub. After a downwind landing at Prescott with the engine extended, inspection revealed all four bolts retaining the prop had sheared.

The prop bolts had not been retorqued in two years and the hub had apparently shrunk in the dry Arizona climate after coming from Ohio. Retorqueing is listed as a 25 hour procedure for the DG400, but should be done annually as is required for the PIK20.

Bill reports no damage to the airframe etc. but the prop is still missing.

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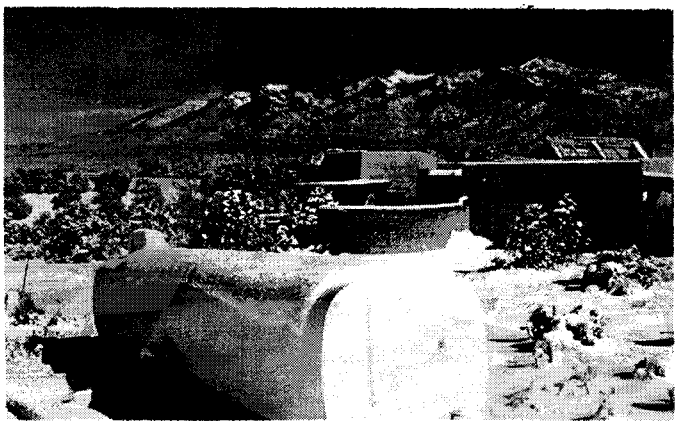

Editor's PIK20-E -- December 1996