Auxiliary Powered Sailplane NEWS

The Official Publication of the Auxiliary-powered Sailplane Association, Inc.
Dean Carswell-President
ASA is a Division of the Soaring Society of America

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President's Message

Preparations are well advanced for ASA's involvement at the 2002 SSA Convention in Ontario CA. The ASA Breakfast and Annual Meeting of Members will be held on Friday February 8, 2002. I am very pleased to be able to announce that the keynote speaker at the breakfast will be Bill Ard of Russia Sailplanes, the US importer of the Avia Stroitel Russia series of sailplanes including the new self-launching AC-5M.

I hope you will be able to attend and that I shall have the opportunity of seeing you there. If you have not already made arrangements to attend, you should do so without delay - information and details of the application process, including the making of reservations for the ASA Breakfast, appear in *Soaring* magazine and on the SSA website, www.ssa.org.

The ASA depends on its members for its direction and success. If you are interested in assisting in this process by holding office in the ASA, I would be very pleased to hear from you. The Annual Meeting in Ontario will include the election of Directors in place of those retiring. Additionally, the office of Secretary is vacant, and I would like to hear from anyone who is willing to volunteer for this position. You can reach me at rdcarswell@aol.com - ASA needs volunteers!!!

Continuing with ASA's initiative and commitment to improve sailplane safety, if you are planning to attend the Convention, I would strongly recommend that you take the opportunity to go to the Soaring Safety Foundation's Safety Seminar, to be held on the afternoon of Wednesday February 6, 2001. See page 2 for ASA Membership Meeting.
Dean Carswell

Sweetwater strip as seen from over 15,000 ft msl. Located about 45mi South of Minden NV. Sweetwater is used by Marine C-130s. Its elevation is close to 7,000 ft and the surface is hard dirt. The snow covered 12,000' mountain in the background is Mount Patterson. Sweetwater is a usable out landing field for sailplanes and retrieve tows are possible. A powered self-launch can be executed safely if the wind direction cooperates.
Image from Pete Williams' DG-400.

Stan Nelson Establishes Speed & Distance National Record for Multiplace Motorglider

(750 Kilometer Out and Return Flight 74 mph May 30th 2001)

At 1125 am on May 30, 2001, I was towed aloft in my ASH25e by a Cessna 182 owned by the White Sands Soaring Association. The declared task was from Alamogordo White Sands Regional Airport to a Fire Tower on a ridge just south of Taos, NM and return for a total out and return distance of 760 kilometers. The plan was to fly to the turn point and, if the weather was favorable, to continue north, if not to return to Alamogordo. Prior to takeoff we noticed a few small cumulus clouds over the Sacramento Mountains to the east of the airport. My passenger was Anthony H. Johnson from Orlando, Florida. The winds were essentially calm and the takeoff was made on runway 21. I released from tow over the airport at 7,060 feet MSL at 1136. After completing a right turn I flew north and extended and ran the sustainer engine for approximately three minutes. I was unsuccessful in finding significant lift near the airfield so I made my start over the airfield and flew toward the foothills where I found weak lift for the first thirty minutes of the flight. Slowly working northward, I flew toward a lone small cumulus cloud about ten miles north where I was able to climb sufficiently high to connect with a forming cloud street east of Cloudcroft. This cloud street was significantly east of our course and orientated north south pointing toward Ruidoso, NM. We made good time running under the street north until it became more widely scattered cu's.

Continued on Page 2.....

Check Your Spark Plug Connections

I had an unusual event when one of the spark plug caps (the tiny cap that screws on the top) unscrewed. I initially was going to use Locktite on this but my ultralight buddies who have much more experience with 2-stroke engines pointed out that Locktite might break down in the heat and doesn't conduct electricity well. They make it a point to take these caps off and scratch up the threads and reinstall the cap when installing new plugs. Another note is that before I found this on the prior flight I was getting intermittent radio noise which tipped me off to the problem. *Submitted by Jim Leedy DG-505MB*

DG Solo Users Group Formed

Jim Herd has established an ongoing email dialog with most of the USA DG owners. This group shares useful information about techniques and problems encountered while flying or maintaining DG 800/808 and 505MB models. Pilots interested in receiving or sending emails from/to this group visit web site:
http://groups.yahoo.com/group/DGSoloUsersGroup or contactJim Herd at <JLHerd@home.com>.

FOR SALE SUPER XIMANGO

N545X, 360 hrs., excellent condition, NDH, always hangared, demo flights Denver, CO area, delivery & training, specs/photos available via email. Health forces sale. $88,000. Email: neditateco@earthlink.net, Cell:303-641-5190. (CO)

Auxiliary - powered Sailplane Association, Inc.
Annual Meeting of Members Friday February 8, 2002

NOTICE is hereby given that the ANNUAL MEETING OF MEMBERS of the Auxiliary - powered Sailplane Association, Inc. will be held at the SSA Convention in Ontario CA on Friday February 8, 2002 at 8.00 a.m. All members are entitled to attend and vote at the meeting. By order of the Board of Directors

Note: (1) The Meeting will be held in conjunction with the ASA Breakfast at the SSA Convention; members do not require to go to the breakfast to attend the Meeting. The business of the Meeting will include the election of Directors in place of those retiring. If you wish to nominate a person for election, please make the nomination in writing to the Board of Directors, Auxiliary - powered sailplane Association, Inc. c/o 8041 Jordan Lane, Midlothian TX 76065-5956, USA.

Parting Out PIK-20E

Rotax 501 with prop 97 hrs. TTE. Complete Set of Covers. Fuselage smashed. Wings repairable. Also parts for Schweizers and Blaniks. Contact Ron Percy at Rainbow Flying Service. Moses Lake WA 509-765-1606 Email: ronp@qosi.net

Powered Sailplane Instruction & Delivery

Dave McConeghey ATP CFI Motorglider
davemcconeghey@hotmail.com
http://www.angelfire.com/ks2/motorglider
7550 S Blackhawk St Apt 1108
Englewood CO 80112
Home: 720-479-6628
Cell Phone: 303-591-2411

FOR SALE-PIK-20E 2F

Low Time TT 252hrs, TET 38hr on Rotax 505. Full panel, Transponder, Parachute, PIK Trailer, Wing Covers, Solar Chargers.
$48,500
Call Klaus at 719-539-7955 B&J Flying Service

FOR SALE-PIK-20E 2F

800hrs TT, 140hrs engine, Cambridge, Winter, Comm, Factory Trailer, Strong Parachute. All in excellent condition....**$42,000**
John Silverberg 860-935-5325 (CT)

FOR SALE Grob Twin IIISL

1992 2-place Self-launching Sailplane with Cobra Trailer. 600TTA; 200TTE, New poly paint, fully instrumented.The best self-launch trainer for commercial operators.
Dieter Bibbig 970-925-3418 Aspen, CO

750K Flight continued from Page 1

We were flying between 14,000 and 16,000 msl and on oxygen. There was a significant headwind on the order of 25 knots from the northwest. Approaching Santa Fe the weather began to deteriorate as we flew into a different air mass caused by an approaching cold front extending east/west into southern Colorado It was extremely rough and turbulent crossing the mountains near the Santa Fe ski area. Approaching Taos the bases got lower and it was questionable whether we could make turn point. Virga existed in the Taos Valley and rain showers could be seen just east of the Town of Taos. Since I live in Taos, I knew that this weather situation was not good. As we made the turn point we began getting some large raindrops hitting the canopy that sounded like hail. It was great making the turn, which took us almost four hours because of our reduced ground speed northbound. After the turn, when I got squared away and got back up to cloud base and checked the wind on the computer. It reported that the wind was now from the southwest, (a headwind component) which would have made completing the task unlikely. Fortunately, several minutes later I checked again and the black box reported a tail wind component, which proved to be correct. The trip back to Alamogordo was fast and uneventful except for one low point after thirty minutes of dead air, a climb that saved the day near Willard and an east/west line of rain showers north of Sierra Blanca peak which we circumnavigated. We played it safe because of large areas of sink toward the end of the day on the west side of the mountains and arrived over Alamogordo with altitude to spare. *Submitted by Stan Nelson*

News and Views

Mike Moore, Bob Davis and Pete Williams beside Mike's new DG-505MB at Minden. NV.

Dreams do come true. Left: A DG-400 waits patiently on the ramp at Tonopah, Nevada to be up and away cloud streeting in a sky many sailplane pilots just dream about.

Left: Schempp Hirth's graceful 20-Meter, 2-place Duo Discus can now be ordered as a "Turbo" powered with a Solo sustainer engine. According to the factory the "Duo" supplements the Janus Ce and the Nimbus-3D filling the need for an advanced training and cross country sailplane.

Right: Karl Abhau climbs out in his Nimbus 3DM near Lake Tahoe, NV

The Jan-Feb 2002 newsletter will contain feature articles of Schempp-Hirth's motorized sailplane line.

WHAT A GREAT LIFE!

Submitted by Charlie Gray

Many years ago, when I was 16 years old I took my first flight instruction in a Cessna 120. Over the years I flew as much as time and money would allow. When I was 32 1 decided to be an airline pilot and got a job with Eastern Airlines, flying for almost 25 years. A friend of mine, Vince Power, who just earned his glider add-on license took me for a ride in a glider. Boy was I hooked. In less than two weeks at Barry Soaring in West Palm Beach, Florida, I earned my commercial. glider license, and started to fly gliders. My friend bought a Dimona motorglider and talked me into another ride. I liked that idea so decided I had to have one.

Last year I bought a Ximango motorglider in El Mirage CA and decided to fly it home to Merritt Island, Florida. First and Second mistake. This Ximango was a factory built experimental motorglider. On the trip home my first stop was at Tucson, AZ. On take off from Tucson one of the hose clamps came off resulting total engine failure. Watch OUT Tree! Little did I know an IA had changed the fuel system. He must have put a very small tee fitting in the main fuel fine with hose clamps instead of the proper threaded type. There went my dream. Not a scratch on me. That 4 hr. trip from El Mirage to Tucson AZ, getting in the wave to 14,500 ft. (no oxygen) with the engine at idle told me I still have the Bug to own a motorglider.

I started to build a Europa Kit with motorglider wings but, after building over a dozen home built aircraft, I felt the need to fly now. My Europa project is up for sale. This time I found a good looking Grob 109B at the Grob factory in Ohio. Mike Shade is doing a good annual with all the correct parts and hopefully by the time you read this I will have flown my new baby home. Now I will be able to motor to good thermals and enjoy soaring at it's finest. I know the thermals don't measure up to west coast heights but we still have lots of fun on a good day to 5,000 plus feet in central Florida near Seminole Lakes glider airport. I have a CFIG rating and will be happy to add my services for motorglider check-outs. I want to thank all who make the ASA possible. I know the hard work it takes to keep it going. If you are in the area give me a call. 321-449-9551, e-mail caray@cfl.rr.com. We live on Merritt Island 2 miles from the airport. (COI.) That is close to Cape Canaveral and we can see and feel the shuttle launch..

UP-DATE - I picked up my Grob in Ohio and flew for 4.5 hrs. over the mountains to Charlottesville TN. The whole southeast USA was covered with very bad weather. With only a compass and hand held GPS, I made the decision to leave my new baby in a hangar and flew home, United Airlines (my daughter is a flight attendant) The weather appeared to be un-flyable for days to come. Finally, my wife and I drove with a flatbed trailer for 14 hrs, took apart and loaded the Grob and DROVE home. Man what a job. !!! It took us 11 hrs. to make wood parts to secure motorglider to the trailer and almost a 19 hr. drive to get back to Florida. However we made it and now is the time for all good pilots to get flying. I am looking forward to many hours flying and soaring with my many friends here in Florida. Again - thanks for a great newsletter and all the time you spend helping us enjoy our hobby.

Good Soaring,
Charlie Gray

Charlie and his Grob 109 in Ohio

Charlie and his Grob 109 on the way to Florida

September 11, 2001 & The Effects on Soaring Flights

In the aftermath of the devastating and despicable attack on the World Trade Center the long term effects on General Aviation are yet to be felt. Prohibition of glider flights within and over Class B enhanced airspaces is sure to remain. Motorglider pilots who fly from airfields under a Class B shelf should contact their local FAA authorities. There also remains a strong possibility that transponders may be required in all gliders. A possible exception is glider training flights that remain within a certain distance of their home field. We just have to wait and see. Ed.

Minden Soaring Club Announces New Web Site

The Minden Soaring Club (MSC) has recently incorporated an a non-profit corporation. As part of an effort to keep soaring pilots world-wide up to date on whats happening at the Minden-Tahoe Airport a comprehensive web site has been established. The new site has information on weather, up coming soaring events, cross-country routes, accommodations in the Minden area and much more. The site can be accessed at <www.mindensoaringclub.org>

CDI IGNITION SYSTEMS EXPLAINED

Chuck Rausch has prepared an in depth trouble analysis of the dual Ducati CDI (Capacitive Discharge Ignition) System used in 2-stroke Solo and Rotax engined motorgliders. This 4-page presentation is easily understood and covers everything you need to know about how the system works, the components involved and tests. A full page wiring diagram is included. For a copy of this document send a self-addressed #10 envelope with a 34 cent stamp on it to Pete Williams 1033 Dresslerville Rd. Gardnerville, NV 89410

ASA DIRECTORS/OFFICERS

Directors (with year they will retire)
Carswell (Chairman) 2003
Howell 2002
Dyer-Bennett 2002
Capitano 2002
Schurmeier 2003
Arnold 2003
Utley 2004
Nelson 2004
Greenwell 2004

Officers (hold office until 2002 meeting)

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Safety and Competitions	Howell

DG-800B DRIVE BELT FAILURE

The image above is a portion of a drive belt that failed during ground runup in Steve Dashew's DG-800B. This belt failed after 11 hrs. Cause is unknown and no other failures are documented. It is a Gates Rubber Company Polychain GT-8M-2400-36 (DG Part No.). According to Steve it was a tension failure across 3 teeth with the reinforcing fibers broken at different lengths. Steve obtained a replacement belt overnight from a source in New York. As a matter of interest this belt is used in Harley-Davidson motorcycles. The version used by DG has the opposite side smoothed while the Harley belt has small ribbing protrusions on the back side. DG recommends using the smooth sided version so the plastic rollers that ride on the belt's outside will roll on a smooth surface. Steve reports no problem using the Harley version but will install a factory belt when it arrives. Steve noted the belt was somewhat loose after a few hrs and tightened it. It is only a speculation that the belt's wear was accelerated due to running slightly loose. Check belt tension before and after each flight and adjust to proper tension per DG instructions.

DG-400 FOR SALE

s/n 4-258, TTAF 250, TTE 36, 8 SMOH. One owner, all AD's accomplished. SNAV, Dittel, transponder, solar panels, EGT gauge, gap seals, Wedekind hookups, interior 10, exterior 9+, Cobra trailer, one-man rigging. Motivated seller. $65,000 OBO. (909) 780-9880 eves, or email malpond@earthlink.net.

AC-5M "Russia" Motorglider Performance

AviaStroitel announced its intention to finish the first ten ships immediately, getting the best performance they can out of the current system. The factory will calculate a full performance chart but has sent some base line 1000' MSL figures. Shown below are some comparative figures gleaned from the ASA Specifications and Performance Data sheets:

Ship	Climb Rate @gross	Take off Dist.	50' Climb Dist.
AC-5M	500fpm	500'	825'
DG-400	600fpm	754'	1007'
DG-505M	460fpm	951'	1463'
PIK-20E	590fpm	700'	1300'
Stemme	590fpm	850'	1496'

ACM-5 Performance Specifications

Max takeoff Power..... 25hp 5 minutes at 6250 rpm
Max. Continuous Power.....21hp @ 5,700 rpm
Rotation Speed.....43 kts
Best Climb Angle.....46 kts
Best Climb Rate.....51 kts
Engine Extracted L/D.....18:1
Takeoff minimum CHT.....320F
Climbout Max. CHT.....500F
Max CHT for retraction.....350F (20-30 sec idle @ 52 kts)

About "performance": Some of us appear to have an unrealistic picture of what we are building here. The 15-meter DG-400 takeoff performance is the target we've been shooting at and we are not far off overall, according to this report. In addition, please note that a 10% reduction in power still gives the 5M a power to weight ratio better than the DG-400 (24.44:1 vs 24.6:1). The prototype's 730 fpm sea level climb outclassed the takeoff performance of just about every other self launcher on the market; that we can't match this performance with an exhaust system that will actually fit under the motor bay doors is very unfortunate, but it in no way compromises the validity of the 5M's performance. The idea that for $30K the 5M has to have takeoff performance better than sailplanes two to five times the price, and in fact better performance than most powered training aircraft, is not a valid assumption. Next step: As always, there are plenty of pilots on the list looking to move up, so it should be no trouble to swap delivery positions if customers decide to wait for further developments. We should soon have the density altitude calculations necessary for the high-desert pilots to make a decision. For the rest of us, it's a relief to have the pipeline ready to open again.

Bill Ard, Russia Sailplanes
Dateline July 7, 2001

FOR SALE

2-Place Aerotechnik VIVAT Motorglider
1993 L-135EH 175hrs TT Transponder Mode C, COM, GPS III Numerous Spare Parts, Trailer included, $55,000 O.B.O.
J.R. Owings 217-672-3729 (IL)

FOR SALE

1990 GROB 109B Motorglider.

Powered by 2500CC VW engine modified by Grob for aviation use (1296 total hours). Three position prop (Climb-Cruise-Feather). Cruise speed about 100kts. Climbs at 5-600fpm. Burns 5 gal/hr. Range using 26 gal. is about 500sm (800sm at 75kts). Glide ratio: 25-28:1 at 60kts. Glider License only. No Medical is required. Well maintained & flown regularly. $60,000 OBO. Doug Off, 2161 Ventura Blvd. Oxnard, CA 93030, 805-988-0300

FOR SALE....DG-800B

1996, 500hrs TTAF, 50hrs TTE. Fully Instrumented with GPS and 02 system. 50hp MidWest Engine. 15 & 18 Meter Wing Tips. Engine and gel coat in excellent condition. Cobra Trailer. $105,000. Ed Shilen 903-887-9720 (TX)

FOR SALE:DG-505MB 20/22

New May 2001, 60hrsTTAF, 11hrs Engine; Dual L-Nav,GPS,O2, etc; Latest engine & options; Cobra Trailer. $160,000 including checkout and MG endorsement if needed. Mike 775-782-1224 or soarmoore@aol.com
Minden NV

INSTALLING A COCKPIT SOLAR PANEL

By Steve Dashew

I base my DG-800B at the Tucson Soaring Club (El Tiro Gliderport, AZ) under a shade hanger, so do not have a source of outside power. With a Filser glide computer, Becker radio, and Terra transponder going and flying three to five hour flights, keeping the batteries topped up becomes an issue.

I use a 50 watt Siemens solar panel, on the ground for recharging. This works fine during the week, but after a long flight on Saturday, the panel does not have time to fully recharge the batteries for a Sunday flight.

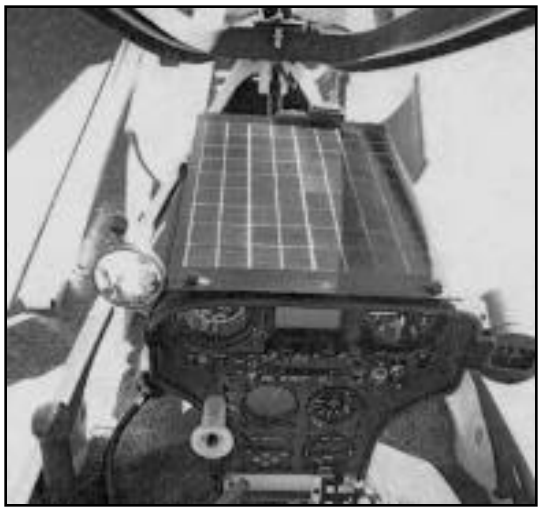
My DG was ordered with two Strobyl solar panels mounted on the instrument cover. However, these appeared to do little or nothing towards maintaining the batteries during flight. I subsequently found that shading by the rear view mirror and compass reduced output of the two panels by about 85%.

Pete Williams supplied me with a 10 watt solar panel measuring 10" x 16" to test. The cells are laminated between mylar which in turn is glued to a light fiberglass substrate. I installed this panel on top of the instrument cover, with the aft edge of the panel even with the aft edge of the cover. It overhangs forward a bit, but this is not an issue with rudder pedal or foot clearance. I used some nylon spacers to lift the panel 1/4" above the cover to help keep it cool. The panel is wired directly to the battery switch without a diode or regulator (both of which use power). The panel is small enough that overcharging is not an issue, and as the battery switch is turned off when the ship is not in use, back feeding from the batteries to the solar cells is not a problem. The mirror was moved to the left side and down, and the compass was moved to the right side - both work fine - and now do not shade the panel.

The edges of the panel produced a glare on the canopy. These were covered with a black striping tape (I did not think paint would adhere to the mylar). Late in the afternoon, on some headings, the silver connections between the panels produce a reflection on the canopy. However, so far this is not enough of an annoyance to make it necessary to put tape over these areas.

The results are dramatic. This past weekend I flew both days, each a four hour flight. The Arizona summer monsoon season is beginning, so there was a lot of flying under clouds - which reduces panel output. Both flights started with the batteries at 13.1V. On Saturday, batteries were 12.9V at the end of the flight, with the solar panel off and electronics off. Sunday, with more cloud cover the day ended at 12.8V. In both cases, this is essentially a fully charged 12V battery.

Output in the spring or fall, when the sun is at a lower declination, will be reduced. However, my guess is that for all practical purposes the panel will balance out the electrical loads, or at worst, keep it at a net loss of an amp or so for a long spring flight. And if these are blue days, as they tend to be in Arizona, overall output is probably going to be about the same as the monsoon flying.



Living with a Two-Cycle Reciprocating Engine

Almost all retractable engine sailplanes have a 2-cycle reciprocating engine. While the 2-stroke engine is model of simplicity in design and operation, there are several problems that can be perplexing. Most are found during the starting sequence and are associated with 4 basic power plant systems: 1. Fuel 2. Carburetor 3. Ignition 4. Battery

Assuming that the engine has a CDI ignition system, some typical situations are: engine will not start; engine starts but is reluctant to accept additional throttle; engine starts then quits; engine backfires on start; smoke emitted on start; engine starts and runs rough; engine starts but will not attain rated rpm at full throttle; fuel pump makes a "clacking sound" and engine will not start; engine starts then quits cold when testing one of the ignition circuits; engine starts and rpm loss is excessive (over 300 rpm) when testing one or both of the ignition circuits. To cover in detail all of the ramifications would require a book, therefore some basic troubleshooting actions are suggested:

A. Engine will not start: Is there fuel in the tank and is the fuel lever on? Perhaps the engine needs choking or priming. Is the engine rpm at least 500 during a start? Check battery voltage. At least 500 engine rpm is required for the CDI ignition system to provide a hot spark. Are the spark plugs firing? There could be an air block in the fuel lines. Check the fuel filter to see if it is at least half full of fuel. If excessive prime or choke has been used, the engine may be flooded. Can you smell fuel fumes? Stop choking, wait a few minutes and try again. The best action is if there is no start after 20-30 prop rpms, abort the start, turn off the ignition and wait for a few minutes while checking the items listed above.

B. Engine starts but is reluctant to accept additional throttle. This can be a carburetor or an ignition timing problem. Or it may simply be the throttle is being stroked too rapidly. Remember the fuel air mixture in 2-stroke is critical and any pumping of the throttle makes things worse. Slow and minute throttle movements get the best results. It is also possible that the carburetor's diaphragm is old and stiff and needs replacement.

C. Engine starts then quits. This is usually due to not enough a fuel (prime) and/or too much air. Make sure the throttle is just cracked open a tad and try again. It could also be due to preservative oil being present after engine storage and fouling the spark plugs.

D. Engine backfires on start: This can be an ignition timing problem (too far advanced) or not enough fuel and/or too much air. Check position of flywheel for the proper ignition timing position. Place the throttle in the just barely open position and try again. If the engine backfires at full throttle while adjusting the high speed needle on the carburetor, richen the mixture slightly and adjust to a lower EGT temperature. Better to be on the rich side.

E. Smoke emitted on start: Normally this can be one of two things. The engine is burning off the preservative oil (white smoke) or the mixture is too rich (black smoke). If preservative oil is present it will burn off within a few moments. Black smoke requires carburetor adjustment to a leaner setting.

F. Engine starts and runs rough or surges: A fuel filter could be dirty and/or there is a restriction in a fuel line or air in a fuel line. Check all fuel line connections. Replace or back flush the fuel filter.To remove an air block in the fuel lines, remove the fuel line at the carburetor, turn on the fuel pump and pump fuel into a container until all air bubbles disappear. Then turn on the fuel pump again and measure the ccs of fuel emitted v.s. time per maintenance manual instructions.

G. Engine starts but will not attain rated rpm at full throttle: This is normally a fuel flow problem but can also be the throttle linkage is binding or needs adjustment. Adjust carburetor needles both high and low speed and the idle adjustment setting per the maintenance manual.

H. Fuel pump makes a "clacking" sound and engine will not start: This sound means the there is no fuel passing through the fuel pump. Check that the fuel valve is on and fuel filter is clean. Air could also be in the fuel lines. See F. above. When the fuel pump "loads" with fuel, the clacking sound disappears.

I. Engine quits cold when testing one of the dual ignition circuits: This is an ignition system problem that requires several resistance tests per the maintenance manual. It can be something as simple as a broken wire in the ignition cabling or it can be a defective ignition box. Ignition malfunction is one of the most common problems in 2-stroke engines and requires a measure of expertise to troubleshoot.

J. Excessive rpm loss (over 300 rpm) when testing the ignition circuits: This can be due to dirty, improperly gapped, worn or fouled spark plugs. It can also be due to loose spark plug cap connections.Always use the recommended spark plug. An alternate plug may not fit the connection cap properly. Changing the spark plugs at the beginning of each season is a good practice.

From the foregoing we can see it is necessary to keep a clean and air-free fuel system, a clean and adjusted carburetor, adequate battery power and properly gapped spark plugs. Since the CDI system has no moving parts except for the rotor, its performance is based on wire path integrity and herein is the problem as vibration remains the basic cause of all CDI problems. This includes wires rubbing together enough to wear the insulation off. It also includes tie wraps being pulled too tight and injuring wire insulation. The later model self-launchers appear to have better wire protective sheathing and cleaner wire path routing. One additional thing to keep in mind is the 2-stroke engine is designed to run relatively smoothly at full power. It is not a cruise engine and tends to vibrate at lower rpms. Therefore, it is suggested to keep taxiing operations to a minimum and adjust rpms to minimize vibration. For most 3:1 ratio engines this is 2,500 rpm at the crankshaft (800 + propeller rpm).

One final caution: Prolonged cranking can deplete battery power to the extent that a successful start becomes an impossibility. Allow the battery to recover between start attempts by turning off the ignition and waiting for at least 3-5 minutes. In hard to start situations, use of external power is recommended to preserve internal battery power. *Submitted by Pete Williams*

ASA Mission

The **A**uxiliary-powered **S**ailplane **A**ssociation, 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, 1930 S.W. 8th St.,Boca Raton, FL 33486-5205 Tel: 561-750-6876 Fax: 561-393-7458 Annual Dues: $20 USA, $25 International

ASA Officers

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Competition: Rick Howell.....972-245-0830

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Contributors are requested to submit hardcopy typewritten or keyboarded text .12pt font size is best for accurate scanning. If submitting text on a floppy disk, please advise the word processing program used.Text may be edited as required to fit the newsletter. The newsletter is produced on a Macintosh G-3 using AppleWorks word processing software. Photos are always welcome and will be returned promptly.

The newsletter is delivered to the printer the last week in Jan; Mar; May; July; Sept & Nov. ASA desires input on what the members want in this newsletter and we are doing all we can to keep it informative and interesting. ***It's your newsletter, so please let us hear from you!***

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