

Points of Interest Inside:

- Upcoming Oldtimer Events.
- President's Message - Peter Scott.
- Coota Cup update - Grant Manwaring.
- Golden West Oldtimer report and results.
- Which was first - the Burd or the Bomber?
- K&B 6.5 Tests - Hank Sperzel.
- Old Engine Analysis - Anderson Spitfire.
- ½A Texaco Tuning Tip - Tom Boise.
- Slim Jim from 1949.
- The Back Page.

**Newsletter
No. 189
July - August
2014**

From Brian Laughton -

brianlaughton@dcsi.net.au 03 5989 7443

Invitation to SAM 600 Oldtimer Weekend at Cohuna on 20-21 September, 2014.

For those who are attending the Coota Cup it would be terrific if some of the fellows could come to our comp the following weekend, making it an "Oldtimer week away". The weather is usually good at Cohuna this time of the year. There is a motel that we all stay at that is reasonably priced and clean but not flash. Their phone number is 03 5456 2974 and the ladies name is Rosemary. If we have enough numbers they put on a delicious spit roast on Saturday night. The events are:

Saturday - 1/2A Texaco, Burford /Electric Coota, Duration.

Sunday - 10am Texaco, Climb & Glide & '38 Antique.

Cootamundra Oldtimer Weekend

THE COOTA CUP

12-14 September, 2014 at the State Flying Field - Cootamundra.

Friday 12.9.2014

1pm Oldtimer Glider (not part of Coota Cup)

Saturday, 13.9.2014

9.30am - Burford Event then Duration

A social Dinner in the evening will be organised when we get numbers.

Sunday, 14.9.2014

9.15am - 9.45am Cabin Scramble 10am - ½A Texaco followed by Oldtimer Texaco.

*** All comps will be run to MAAA 2013 Rules ***

On Field Catering available Saturday and Sunday.

INFORMATION - Grant Manwaring - 02 6241 1320.

grantandmary7@gmail.com

EASTERN STATES GAS CHAMPS - WANGARATTA

4-5 October, 2014. at Wangaratta MAC Flying Field.

Saturday, 4.10.2014

9.30am - '38 Antique, followed by Burford, then Lunch followed by Duration.

A social Dinner in the evening will be organised when we get numbers.

Sunday, 5.10.2014

9-15am Cabin Scramble - finishes at 9.45am sharp.

10am - ½A Texaco, then Lunch followed by Texaco.

*** All comps will be run to MAAA Rules ***

Electric Events - Details to Come

Catering on field by Wangaratta Club.

INFORMATION - Grant Manwaring - 02 6241-1320.

grantandmary7@gmail.com

DURATION TIMES

Duration Times is the official Bulletin of SAM 1788

SOCIETY OF ANTIQUE MODELLERS OF AUSTRALIA 1788 Inc.

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Oldtimer Events for 2014.

Sept	13 - 14	Coota Cup	Cootamundra	Grant Manwaring	02 6241 1320.
October	4 - 5	Eastern States Gas Champs	Wangaratta	Grant Manwaring	02 6241 1320.
Nov	15 - 16	Belconnen / Yass Old Timer	Yass	Grant Manwaring	02 6241 1320.

Note: Wyong, Wangaratta and Yass/Belconnen Old Timer events will include Electric Oldtimer Events.



From the President:

I have been in contact with the NSW Free Flight Society about running a combined old timer and Free Flight day at their new field at West Wyalong next year and they seem very keen to have this happen.

The date in question would be the long weekend in October 2015, to take the place of the Wangaratta event which this year is bound to make a thumping loss due to the costs imposed on us by the local club to use their field. Though we hope for a good entry to help cover costs, numbers have been down, especially from the Victoria fliers over the last couple of years.

The up side of this is that we can take part in several Free Flight events, such as Vintage power, glider, oz diesel, even scramble. Also, we may get some of their fliers to take an interest in old timer flying. Whatever is flown, it would be a great social event and a chance to make new friends or to renew old ones. Any comments, please 'phone me.

I look forward to Coota, with a couple of new models to try.

Jim Rae is missing this event due to a hospital appointment, good luck James. Condo and May will be there, his operation on his neck worked well and he's almost back to his insufferable self. He has been fettling new models too so I expect that he will be collecting trophies again. I hope that he doesn't chicken out of camping as I lent him my well-travelled tent.

I'm told that Grant has a new Burford model, a Dixielander, of which he is very happy. I hope that it's not as good as my new Eureka, which I've not even test flown yet.

Pray for good weather. See you there.

Peter Scott.



Coota Cup Update 2014 From Grant Manwaring

For the Coota Cup weekend, 13 - 14 September 2014 we have booked the Cootamundra State Field to include Friday 12 September. Our intention is to do some informal Old Timer Glider flying with maybe a couple of rounds depending on the weather and numbers. This will be an informal gathering from 1.00pm Friday thereabouts, we can also include some test flying at this time if required. I will have a winch and bungee available.

Please note this is not part of the Coota Cup point score event.

Also for on field catering purposes I need to get an indication of numbers for Saturday and Sunday. If you are intending to come to the event could you please email or phone me prior to Tuesday 9 September.

Email is grantandmary7@gmail.com or phone 02 62411320.

Please note there is no on field catering on Friday.

On Saturday night dinner will be at the Central Hotel in Parker Street.

Coota Cup should be a great weekend of Old Timer flying, hope to see you there.



Cowra Oily Hand Sportsters



Certainly was a fantastic weekend, was great to see so many Sportsters built for it, 14 in total and another 6 not finished. Definitely put in your diary for next year.

<http://www.cowramac.asn.au/main.html>

Information - Andy Luckett
02 6342-3054 mudpied@bigpond.com

A wife asks her husband, "Could you please go shopping for me and buy one carton of milk and if they have avocados, get six. A short time later the husband comes back with six cartons of milk. The wife asks him, "Why did you buy 6 cartons of milk?" He replied, "They had avocados."
If you're a woman, I'm sure you're going back to read it again! Men will get it the first time. My work is done here.



BELCONNEN & YASS MODEL AERO CLUBS

Old Timer Class Competition 15-16 November, 2014.

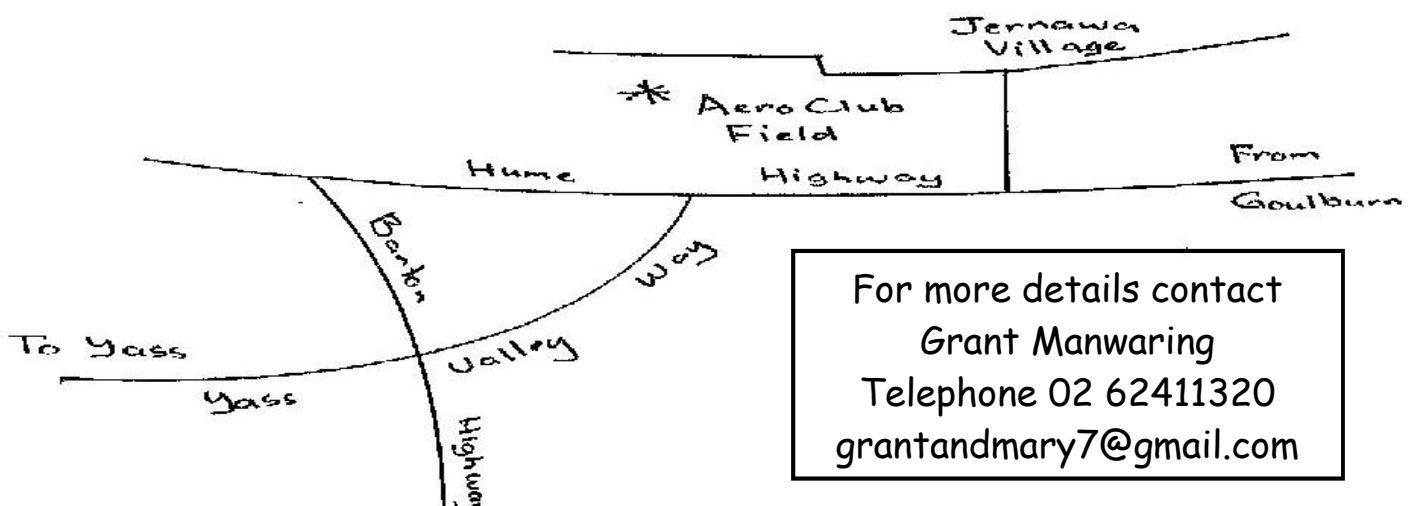
At Yass Model Aero Club Field - Jerrawa via Yass

SATURDAY 10.00am - Burford Event SUNDAY 9.30am - ½ A Texaco
1.30pm - Duration 12.30pm - Texaco

*** 30 Minute Scramble Sport Event, on Saturday ****

Motel accommodation at the Yass Motel, telephone 02 62261055, reasonable rates.

Dinner on Saturday night at the Yass Motel, all welcome.



For more details contact
Grant Manwaring
Telephone 02 62411320
grantandmary7@gmail.com

GOLDEN WEST OLDTIMER WEEKEND - PARKES - 19th and 20th JULY, 2014.

Report from Peter Scott.

The weather leading up to this contest looked and was awful; bitterly cold, icy, stiff winds, snow over the Blue Mountains. We experienced all this on our trip there on the Friday.

Saturday morning the weather was a lot better but low cloud kept us from flying for a couple of hours. Finally we decided to fly Burford avoiding the, by then few clouds.

Eleven fliers in Burford, most people managed a full house giving us nine in the fly-off. One did not start and the last one down was Peter 'Canberra' Smith with his Ollie. Jim Rae was second with the Amazoom and Ian Connell, flying a Spacer, was third. It was good to see Ian back flying and so well!

Antique was flown next. A fairly stiff breeze made things interesting. Jim Rae won this event flying a Rambler with an ED 3.46 up the front - just goes to show how a humble combination can still come up with the goods. All it takes is good flying and some luck. Dave Beake came second flying a Westerner with a Spitfire up front. This looked superb in the air, really a smart looking craft. Dave Brown made third with his faithful Flamingo.

I damaged my Powerhouse on landing, didn't make the fly-off. Makes me wonder, though why the Powerhouse isn't used much now as it flies very well.

Duration was run late in the day, so we decided on two out of three to make up for the late start. We got in the three flights with the fly-off postponed to the Sunday.

The Saturday evening get together was at the Leagues Club - food and company was very good.

Sunday morning was very cold, frost everywhere. We started the scramble at 9.15am approx. Five flew which I thought was disappointing. It was a good contest though and gave me my only contest for the weekend. Peter Van De Waterbeemd came second and Jim Rae third.

$\frac{1}{2}$ A Texaco took place in a stiffish breeze. I damaged the tail on my Stardust Special on landing and had to change to a Baby Burd. I missed out on the fly-off by two seconds. Darren Lydford won this event using a Playboy; Garry Whitten came second with a Stardust Special - he came all the way from Tamworth with one model for one event, now that's enthusiasm! - Ian Connell's come back continued with third in this event with his Lil Diamond.

The fly-off for Duration then took place. Stiff breeze, very turbulent higher up. I got my Playboy up to a great height then promptly lost a third of this height trying to control it!! Bah!! Beake managed just fine with a 93% Bomber with a McCoy spark up front. Peter Van De Waterbeemd was second with the same set-up and Darren Lydford was third with another Bomber and an OS 56 4 stroke up front. Seems like the day of the Playboys are past?!

RESULTS - PARKES OLDTIMER WEEKEND 19-20 JULY, 2014.

Gordon Burford Event

Peter R.	SMITH	Ollie	Taipan PB	900	516
Jim	RAE	Amazoom	Taipan BB	900	426
Ian	CONNELL	Spacer	Taipan PB	900	378
Bob	MARSHALL	Zoot Suit	Taipan PB	900	357
Peter	SCOTT	Jaied Maid	Taipan BB	900	341
Basil	HEALY	Dixielander	Taipan PB	900	273
Alan	BRADY	Spacer	Taipan BB	900	267
David	BEAKE	Ollie	Taipan PB(T)	900	190
Grahame	MITCHELL	Dream Weaver	Taipan PB	900	DNS
Peter	van de WATERBEEMD	Stomper	Taipan BB	896	0
Darren	LYDFORD	Stomper	Taipan BB	773	0

'38 Antique

Jim	RAE	Rambler	ED Hunter 3.46	1800	805
David	BEAKE	Westerner	Anderson Spitfire	1800	787
Dave	BROWN	Flamingo	O&R 60	1800	661
Basil	HEALY	RC1	Sparey 5cc d	1800	629
Peter	van de WATERBEEMD	Long Cabin	GB 5cc	1800	DNS
Alan	BRADY	Comodore	Madewell 49	1797	0
Peter	SCOTT	Powerhouse	McCoy 60	1732	0

Duration

David	BEAKE	Bomber 93%	McCoy 60	840	622
Peter	van de WATERBEEMD	Bomber	McCoy 60	840	459
Darren	LYDFORD	Bomber	OS 56 4/	840	423
Craig	THORNTON	Playboy 110%	OS 37 2/	840	398
Jim	RAE	Lion Cub 130%	Saito 56 4/	840	364
Peter	SCOTT	Playboy 112%	McCoy 60	840	345
Basil	HEALY	Megow Chief	YS 53 4/	840	208
Dave	BROWN	Bomber 85%	Saito 56 4/	840	DNS
Alan	BRADY	Bomber	YS 63 4/	737	0
John	BRADBURN	Playboy 110%	Saito 62 4/	589	0
Peter R.	SMITH	Lil Diamond	Saito 56 4/	385	0

Cabin Scramble

Peter	SCOTT	Mills .75	1343
Peter	van de WATERBEEMD	MP Jet	1336
Jim	RAE	Mills .75	1271
Alan	BRADY		1248
Basil	HEALY	Mills .75	1156

 $\frac{1}{2}$ A Texaco

Darren	LYDFORD	Playboy	1260	881
Garry	WHITTEN	Stardust Special	1260	735
Ian	CONNELL	Lil Diamond	1260	735
Jim	RAE	Pine Needle	1260	712
David	BEAKE	Stardust Spl	1260	643
Peter	SCOTT	Stardust Spl	1258	0
Peter R.	SMITH	Valkyre	1138	0
Peter	van de WATERBEEMD	Lil Diamond	1094	0
Basil	HEALY	Stardust Special	657	0
Craig	THORNTON	Playboy	609	0

Texaco

Alan	BRADY	Bomber	OS 60 4/	1800	1426
Dave	BROWN	Flamingo	O&R 60	1800	1378
David	BEAKE	Bomber	OS 60 4/	1800	1225
Peter R.	SMITH	Bomber	OS 60 4/	1800	795
Craig	THORNTON	Bomber	OS 60 4/	1800	774
Peter	van de WATERBEEMD	Bomber	Saito 65 4/	1800	697
Jim	RAE	Krupp	Orwick 64	1800	DNS
Darren	LYDFORD	Bomber 85%	OS 56 4/	1790	0
Peter	SCOTT	Bomber 70%	ED Hunter	1686	0

We then had lunch and what a lunch it was!! Plenty of hot dishes - soups, stews and lasagna (gluten free for Basil) and homemade cakes. It was almost worth coming just for the food.

Texaco was flown in perfect conditions. No wind, sunny and almost warm. I could not fly my spark due to my stupidity in leaving the tail at home. I tried a 70% Bomber with an ED 346 up front. Good for about nine minutes on average, lack of engine run - I was only getting about 1½ minutes - being the major factor. Alan Brady convincingly won this event with the old combination of a Bomber and an OS 60 4 stroke. Dave Brown was second with his Flamingo and has stated that he will soon have the motor out of the Flamingo and into a Bomber. If you can't beat them, join them? Considering how many events the Flamingo and Brown combination have come out on top, this seems to be a rash decision or he will be truly unbeatable! Beake finished third with another Bomber OS combination. A very successful weekend for him.

In all, a very enjoyable weekend. The cold was a niggle and next year this event will be run much later in the year. It is a great venue, the local club treat us very well. Very good facilities. Don't miss it next year.

WHICH WAS FIRST?

Subject: Lanzo Baby Burd or Baby Bird [SAMTalk]

Of Interest from SAMTalk:

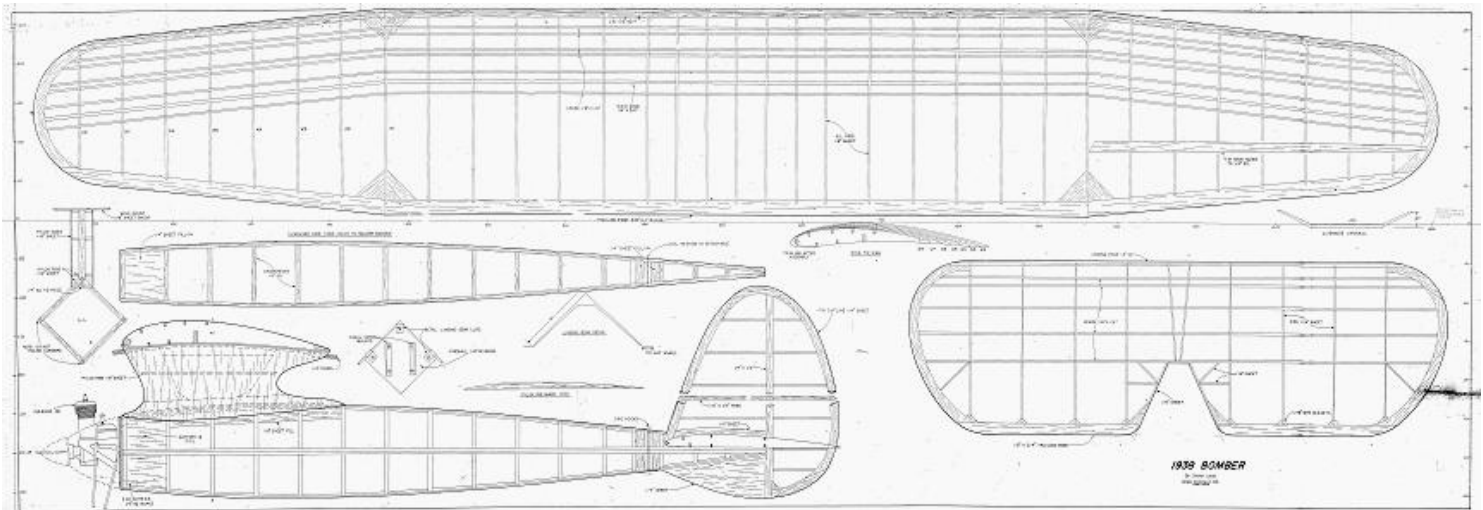
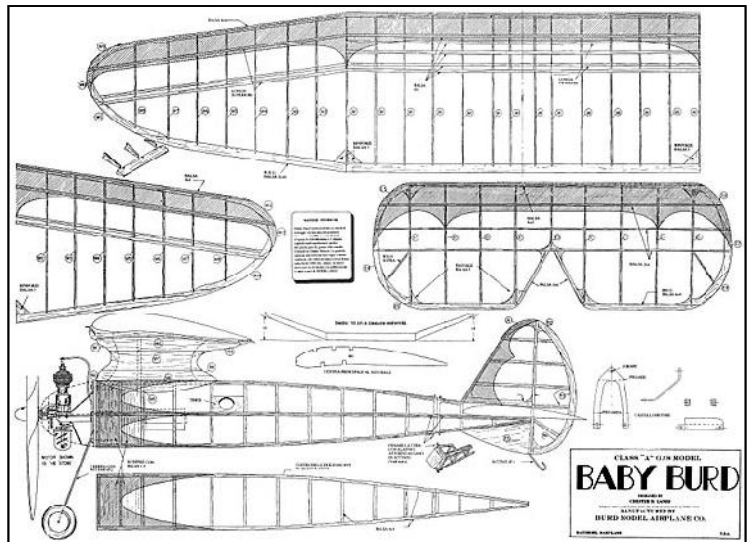
Date: Sat, 1 Nov 2003.

From: Harry Cook <hrycook@swbell.net>

Yes, in the inside cover of Aug 1940 MAN is advert for Baby Burd presented as a "new sensation" at 37" wingspan and 208 sq inch and 24" length - in same advert Chet Lanzo has been added to Burd staff - in Baby Burd advert no mention of engine but guess the Atom was about it then? harry c.

From: Eut Tileston <eut@jps.net>

Yes, I believe it was one of the many (models) designed for the Atom, almost certainly the forerunner of the Bomber which by Lanzo's own words was first flown with an Ohlsson 60 (which was introduced in 1940). Of course he could have designed it earlier, but I very much doubt that it would have been two years earlier!



**FOR
SALE**

Ignition coil assemblies with transistor - ready to go. \$70

Peter Scott

(02) 9624 1262. qualmag@optusnet.com.au

**FOR
SALE**

From Garry Henderson-Smith

Just a quick message to say thanks for a great newsletter, much appreciated. Below is a picture of my two Buzzard Bombshells. The 72" is OS 48FS powered, the 36" has a small brushless bell motor and 2 cell 750Mah battery. Both are lovely Sunday floaters. Thanks again for the newsletter. Cheers, Garry



From reedbanjo@verizon.net

I have assembled an example of probably every Brown Jr engine which William (Bill) Brown made. Even a couple which never went into production....like an inline 2-cylinder, and an experimental "B-1" which has the spark plug horizontally at the top fins of the cylinder.

His first run of engines had an "A" stamped on the mounting flange....along with a few numbers. So far, an "A" example has eluded my search.

If you happen to have an "A" Brown engine, I am willing to trade generously, or pay well for an example.

Thank you.....reedbanjo@verizon.net



Brown Junior Model B (1935)

From Flying Models FB page.

"It is with regret that Carstens Publications, Inc. will be closing permanently at close of business on Friday, August 22, 2014.

Carstens Publications, Inc. has been a leading publisher of leading hobby magazines for over 50 years. Unfortunately the current economic climate has placed us in this position.

Discussion is continuing with several parties who expressed desire to take on the continuance of the magazines. At this point there is still hope that all three titles will remain in existence. But I can offer no guarantees.

We thank you for your patronage over the years, and wish you the best of luck in your endeavors."

--Henry R. Carstens, President,
Carstens Publications, Inc.

Posted by: EUT TILESTON <etileston@sbcglobal.net>

From Hank Sperzel hsperzel@cox.net.

Free Flight Hank in Omaha.

While at Muncie I was having trouble with my K&B 3.5 DF, with the drum intake. The engine was burning a plug every run. I was put in touch with a person who had worked for K&B. Looking over the engine he diagnosed it as bad front bearings. I was sceptical because I saw no evidence of metal in the exhaust or on the plugs and the engine felt good to me. This person had tool boxes of K&B parts and quickly swapped out the bearing and it fixed my problem.

Looking through his stash of parts I came across the "back door" to a K&B 7.5 drum intake ducted fan engine. K&B used the same crankcase for the 4.9, 5.8, 6.5, and the 7.5 engines and I asked if the drum would fit. I was told to take it and try, and I did. Bob Bennett supplied me with a K&B 6.5 Rear Rotor Engine for the test.

The drum fitted just fine, bolted right in place. The first runs were made with the drum and pacifier pressure. The pacifier was pinched off with the fingers of my left hand and the engine was started with an electric starter in my right, and my other hand held the tach. After the first couple of tries to get good data a friend was called to help. I'd start the engine and George would tach it.

Here is what we came up with. As you can see there is an increase in RPM using the drum intake but there is also an increase in weight.

TEST OF K&B 6.5

60° F 76% Humidity Dew Point 50° F
DRUM INTAKE

RUN #	RPM	PROP SIZE	FUEL
#1	19,100	APC 9.625 X 3.75	15%
#2	19,200*	APC 9.625 X 3.75	15%
#3	20,000	APC 9.625 X 3.75	15%
#4	26,420**	APC 10 X 4	15%
#5	32,990**	APC 10 X 4	15%
#6	32,940**	APC 10 X 4	15%
#7	17,500	APC 10 X 4	40%
#8	17,250	APC 10 X 4	15%

REAR ROTOR VALVE

RUN #	RPM	PROP SIZE	FUEL
#1	17,000	APC 10 X 4	15%
#2	18,500	APC 9.625 X 3.75	15%
#3	19,420	APC 9.625 X 3.75	40%

*Found front case loose

** Invalid data (echo to the audio tach, I think)



The standard K&B 6.5 Rear Rotor.



This is the same engine with the Drum installed.

OLD ENGINE ANALYSIS

By Charlie Bruce

(originally published in SAM Speaks #103, Jan-Feb 1992)

No. 1 - Anderson Spitfire

The sturdy Spitfire, which can be described as a Super Cyclone on steroids, has been a solid, dependable runner since its introduction in 1947. Designed and produced by Mel Anderson first as a 60 (bore 15/16" x stroke 7/8"), then as a 65 by increasing the stroke to 15/16". It was one of the last spark ignition engines to be introduced at the beginning of the glow era. A mechanical success but an economic failure, the engine dropped off the market in 1949. About 9 years later it was resurrected by McCord Precision Products and sold as both ignition and glow models with a machined aluminium, blue anodized head and different cam/prop drive arrangement. REMCO produced additional Spitfires around 1970 with the die cast head. There are at least three different heads found on these engines: a standard compression die cast with rounded combustion chamber lobes, a high compression die cast with larger squared lobes and a machined barstock "Denver Head", high compression anodized blue. The engine will generally perform better with the high compression head, certainly better if alcohol fuel is used. At this writing (1992) the 65 is being made and sold by Marvin Miller using original dies and essentially duplicating the 1948 engine.



There are no serial numbers on the engines and no marks to distinguish the 60 from the 65. The 65's are supposed to have 4 "port holes" for sub-piston induction drilled thru the cylinder front and back. However, since all cylinders are interchangeable the only sure way to determine size is to measure the stroke. This can be done thru the spark plug hole without disassembling the engine. Use a depth mike or caliper with a depth stem and measure from the plug seat to the top of the piston at bottom dead center and again at top dead center. The difference between the two measurements is the stroke: 7/8" (0.875) indicates a 60 and 15/16" (0.938) is a 65.

The engine is basically a refined and beefed-up Super Cyclone. It weighs a bit more, 13.8 oz to 10 oz for the Cyke. The added weight comes from thicker castings and a larger crankshaft mounted on a ball bearing to take radial and thrust loads. Mel Anderson did a fine job in correcting two problems with the Cyke, namely fragile castings and excessive crankshaft/bearing wear. The 1/2" dia. shaft of the Spitfire with its 11/32" dia. Gas port provides 21% more breathing area than the 7/16" x 5/16" Cyke crankshaft.

The Spitfire came in both lapped and ringed piston models. I have no personal experience with the ringed engine, but Don Blackburn who does says that the ringed engine runs smoother and has more power than the lapped one.

DISASSEMBLY: To remove the timer you must first remove the prop drive washer. If the cam is on the crankshaft, the prop drive washer just slips off. If the cam is on the drive washer, it is a pretty tight press-fit onto the crankshaft and

should be removed with a small gear puller. Use snap ring pliers to remove the ring retaining the timer, loosen the timer clamp screw and slip timer off its seat on the bushing. Be careful not to lose the two plungers and tiny springs which fit into the holes in the front of the crankcase and engage the timer ratchet teeth.

The plastic fuel tank is held in place by a special nut and long spindle with 3-48 threads on both ends. There are gaskets at the tank/backplate surface and under the special nut. If the tank is shrivelled from alcohol fuel use or stuck, warm it with a hair dryer and it should come off by hand.

The back plate is threaded in place. To remove it you need to make a wrench. Take or make a hardwood dowel a bit smaller than 1 1/4" in diameter and 4 to 6 inches long, set it vertically in a vise and saw two slots in the end at 90 degrees to each other forming a cross. The slots should be about 0.2" wide and 1/4"

deep. These slots are to fit over the projections inside the rear cover. To use, place the wrench in the vise, warm the rear of the engine with the hair dryer, fit the backcover onto the wrench and unscrew by turning the engine counter-clockwise. You may need gloves to hold the engine and if it's an old dirty gummy one, you may have to get it hotter. A heat gun for shrinking plastic covering will get much hotter than a hair dryer. A propane torch can be used in badly stuck cases but be careful! You can melt aluminium with the torch and

set all manner of things afire! There is a paper ring gasket between the backplate and case. If not torn, it can be re-used in most cases.

The cylinder head is retained by eight screws. If the head is stuck, try warming it and gently prying around the edges. Remember die-cast aluminium is soft and brittle. The head gasket will probably have to be replaced. Be sure and remove all of the old gasket and gunk by carefully scraping with a razor blade. If you want to remove the cylinder it is best to be sure the engine turns over freely first. If the piston is stuck, try soaking in carb cleaner for a few hours (remove tank first!). A little heat will usually allow the shaft to be turned with a prop. Don't use pliers. Sometimes a little WD40 in the exhaust and thru the plug hole will ease the process. Do not use open flame around WD40 or other solvents. The cylinder is retained by four screws. There is a paper gasket between the cylinder flanges and case. It can be re-used if in good shape.

With the cylinder lifted off and backplate removed, the piston/rod/wrist pin assembly can be slipped out. Be very careful not to lose the two little wrist pin pads. These are aluminium or brass inserts which slip into each end of the wrist pin to prevent the hard steel pin from scoring the cylinder. When you reassemble be sure these pads are in place.

Remove the snap ring from the front of the crankshaft (Engines with pressed on cam/prop drive do not have a snap ring). If the crankshaft turns freely it should push out the back by hand. You may have to squeeze it out in a large vise. Be sure and protect the rear of the case and front of the shaft with pieces of hard wood to prevent damage. If the ball bearing comes out with the shaft, it may be removed by wedg-

ing using two sharpened flat blade screwdrivers, one on either side of the bearing. Wedge between the bearing and the shaft. If the bearing is in the case, place a flat piece of soft wood (2x4 or 2x6) on the bench, heat the base, and tap it sharply on the wood, back side down. The BEARING is removed by inertia. You may have to heat the case to around 300 degrees F to get the bearing out. Use gloves and don't melt it. If the bearing is rough, replace it with a new one. It's an MRC #R-8 or equivalent unshielded.

RE-ASSEMBLY: This is essentially a reverse of the disassembly process, with a few special notes. Be sure to oil the moving parts before assembly and don't forget to oil the screws. I use Marvel Mystery Oil but any light non-gumming oil will do. Slip the ball bearing onto the crankshaft and be sure it's seated. Do not pound on the outer race! It should seat by hand. If not slip a piece of metal tubing over the crankshaft so it contacts only the inner race and press the bearing in place. Heat the crankcase and place the oiled shaft/bearing assembly in position. It should drop in, seat solidly and spin freely. You may have to tap the shaft gently with a piece of soft metal or a wood dowel to seat the bearing. Let the case cool before proceeding. Be sure the crank spins freely. The cylinder can be installed with the exhaust facing right or left. Decide which way you want it and install the piston/rod assembly so that the piston baffle is furthest from the exhaust. If you put the piston in backwards, the engine will FIRE, it may run but it won't have any horsepower. Remember to see that the wrist pin pads are in place. A few minutes running without them can score the cylinder liner beyond repair.

To install the cylinder head use a new gasket or be very sure the old one is in excellent condition. A bit of Vaseline or moly grease spread on the gasket surfaces will generally keep it from sticking so bad. Note how the combustion chamber lobes are cut to clear the piston baffle and be sure you install the head so that there is no interference.

Remember to install the time ratchet springs and plungers in their holes in the crankcase before you install the timer. Be sure cam is positioned to just open the points at the top of the piston stroke with timer arm horizontal. The cam will go on two ways so be sure it's right or the spark timing will be wrong and it won't run. Start the cam onto the crankshaft flats by hand to be sure they line up with the recesses in the cam. Seat the cam by installing a propeller.

The spark plug is 3/8" Champion V-1 or VR-1 or equivalent. Plug gap is 0.012" to 0.015". Breaker point gap 0.006" to 0.010". Recommended fuel is 1 part 70 wt. oil to 3 parts unleaded gasoline (by volume). You can use a gasoline mixable castor oil if you prefer. The Spitfire runs great on 3:1 methanol and castor oil also, but don't use it in the plastic tank! Start with the timing retarded, arm horizontal or one click above horizontal.

Parts, Engines and Repairs. Original Spitfires show up regularly at swap meets and MECA Collectos. Original parts are a bit harder to find but Marvin Miller at M.B. Miller Co., 250 Bronco Rd., Soquel, CA 95073, has all the parts, as well as new engines. They are beautiful. Send a S,A,S.E. for his list.

Bob Hopper at PO Box 296, Logansport, IN 46947 has repro tanks and unmachined timer castings.

* * * * *



Anderson Spitfire .60



Anderson Spitfire .65 Spark - with high compression head



Super Cyclone .64 (model G)

1/2A TEXACO TUNING TIP # 31.

Thanks to Tom Boice for this submission. Courtesy of SAM 26 Newsletter.

Some thoughts on cylinder and engine combinations.

The Cox Texaco engine was basically a Black Widow engine in a different box. The five fin head was later added. It is the only useful part of the Texaco engine. The combustion chamber and the hot nature of the plug make it a good choice for all engine combinations. The easiest and most practical engine to use for Texaco is the older number 2 cylinder. The cylinders made before 1969 are tapered so the piston runs with less friction.

Set up the head with three head shims, stainless steel reed, and an 8x4 electric prop. The engine usually runs about four minutes at 6,600 rpm. This engine works well with a model that weighs 15-16 ounces. You can put a muffler on the engine and increase the run time to 6-7 minutes at 5,000 rpm. This works best with a model in the 12-13 ounce range. It is advisable to put a 4 inch piece of Tygon tubing added to the muffler to tune the exhaust. That will bring the rpm up 200 rpm.

Another cylinder combination is the older thin wall single port engine. It has a tapered cylinder and is a little more powerful than a number 2 cylinder. With an 8-4 prop it turns about 6,900 rpm for three minutes and 40 seconds on methanol fuel. It runs well on alternative fuel mix, about 6,900 rpm for about six minutes. Planes in the 16-19 ounce range work well with this engine.

A powerful engine can be made with the old number 4 TD cylinder. It is tapered and has a light weight piston, dual port, dual booster, with an 8x4 prop and methanol fuel. It can turn up as high as 7,600 rpm for between two minutes and 45 seconds and three minutes and 20 seconds. It will work well with a plane between 16-20 ounces.

After years of testing, my favorite cylinder is the old 1959 Cox P-40 Super Bee. It is tapered and dual ported. They are stamped P40 under the exhaust port. It sometimes takes a magnifying glass to see it. This is a very powerful engine. It is also very fuel efficient. With an 8x4 prop with alternative fuel mix, it will turn 7,500 plus rpm for five minutes. Good for models 16 ounces plus.

You better have good eyes with a 16 ounce model. It is usually out of sight in three to four minutes. A bigger plane works well with this engine.

Results will vary as I am at 1,000 foot sea level. Higher altitudes run slower, lower altitudes may run faster. All engines were run on the same day with the same prop and fuel. Note the difference in time and rpm with the number of head shims used.

Another way to change the run time and rpm is the fuel mixture. Standard Cox fuel is a blend of castor oil, methanol and nitro, usually 25 per cent.

I have mixed up countless different batches of fuel and have settled on a mixture of 15% oil, with at least 50% castor in it, 12 % nitro, 72 % methanol. You can lower the oil percentage, and gain energy and run time. The trade-off is the friction can increase and nullify the gain at some point. You can lower the nitro and the engine will run longer but with less power. The nitro is a good oxidizer and creates much needed heat.

The alternative fuel I use is a blend of methanol, ethyl alcohol, castor oil and nitro. You can see by the number of head shims used that it likes higher compression and a hot glow head. It is fussy to use and tuning the engine takes time to get used to.

Once you decide what engine you want to put together, the first thing I do is break it in like it is new. I put a small O20 prop on the single port engines, and a 5x3 prop on the dual port engine. I will fire the engines up and run one tank rich, then run five tanks at peak rpm of 16,000-18,000. This really helps to steady engine rpm.

Then put on the 8x4 prop and test for engine run time and rpm. Start with one shim. If the engine flickers back and forth, it means it is over compressed. Add shims until you get the best results. As many as 5 shims may be necessary.

Tuning a Cox engine can be a challenge. The two factors you must contend with are heat loss and fuel pressure change. The pressure change comes from the fuel tank when it is full. There is a slight amount of positive pressure because the pick up is below the top of the fuel line.

As the fuel in the tank goes down, it must be sucked up, creating a negative pressure. A negative pressure can lean the engine out. The heat factor comes when you launch your plane. There is more air cooling the engine as the plane flies thru the air. As the engine cools, it wants a richer mixture. At the same time, the engine is running leaner because of the negative fuel pressure. It doesn't take long before the engine quits. You may think the engine got hot and quit but more likely it got cold and quit.

One easy way to tune an engine for a beginner, is to know how long the engine runs, let's say three minutes. Start the engine, top it off, and time it. After two minutes of run time, tune the engine to peak rpm. Then fill the engine and launch.

Tip - remember where the needle marker is set. On the next flight you can use the position to richen or lean the mixture on the next flight.

The heat issue can be addressed two ways. First you can increase the nitro content of the fuel. The second is to insulate the cylinder. I usually cut a strip of a cotton rag and wrap it around the head, being careful not to cover the exhaust port. If you tune the engine correctly, it will run rich, then peak, then lean.

When you go for a longer running engine, you are stretching out the same fuel over a longer time, magnifying the heat and pressure challenge. For those who like to tinker this is a lot of fun. For me, I will run the P40 and go for the clouds.

I hope this gets your interest up to fly in the 1/2A Postal Challenge. Tom Boice.

From Alfredo Herbon

aherbon@coopenet.com.ar

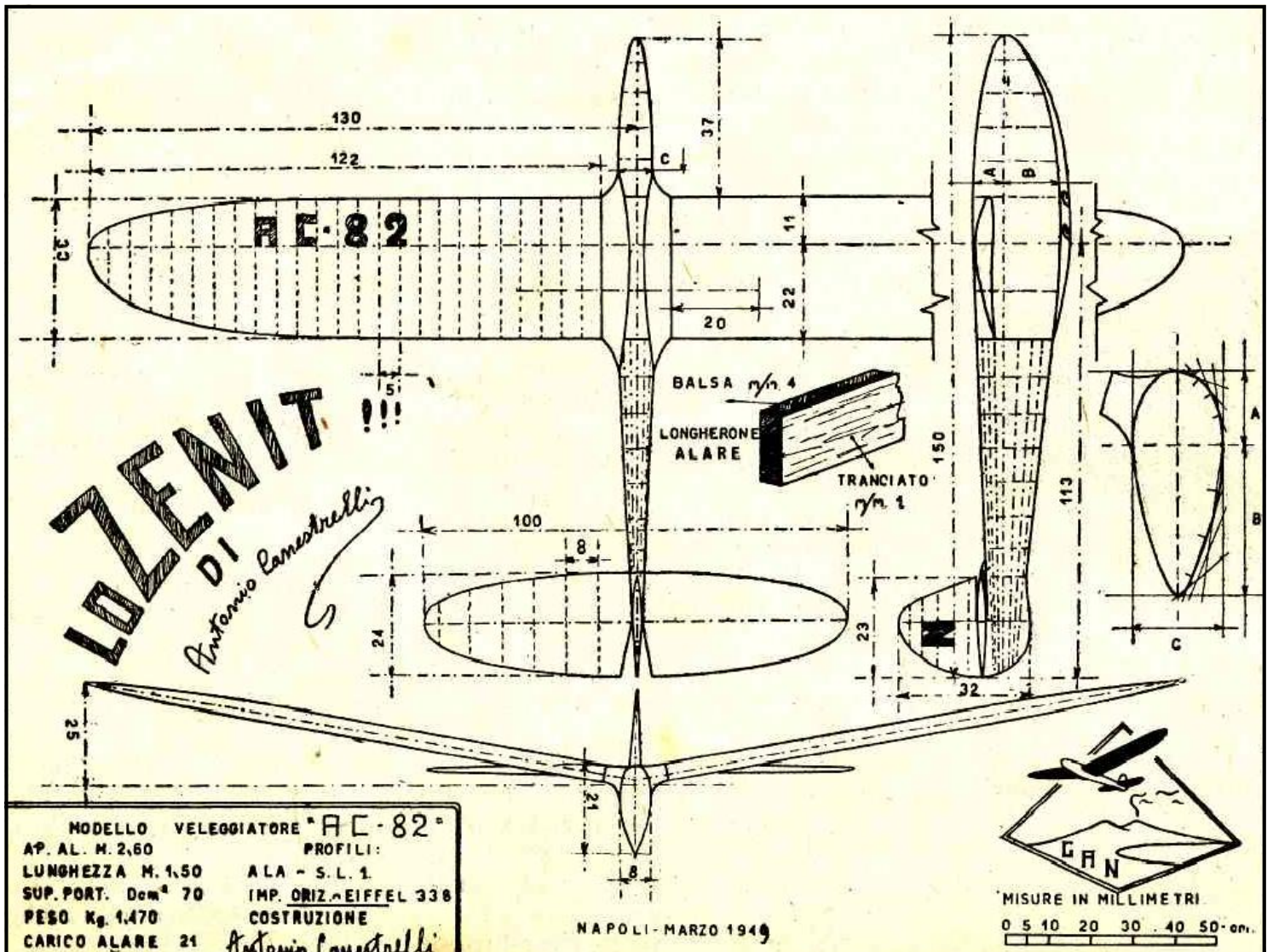
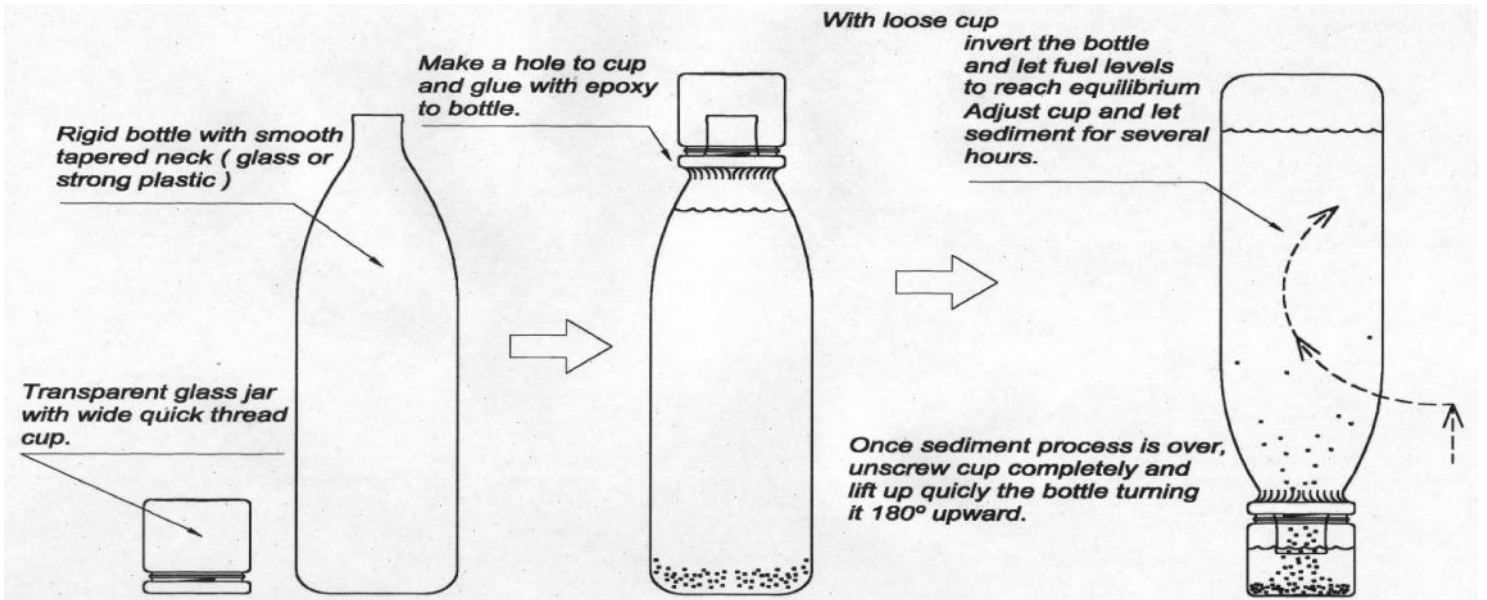
Clarence Lee said that fuel improves with age.

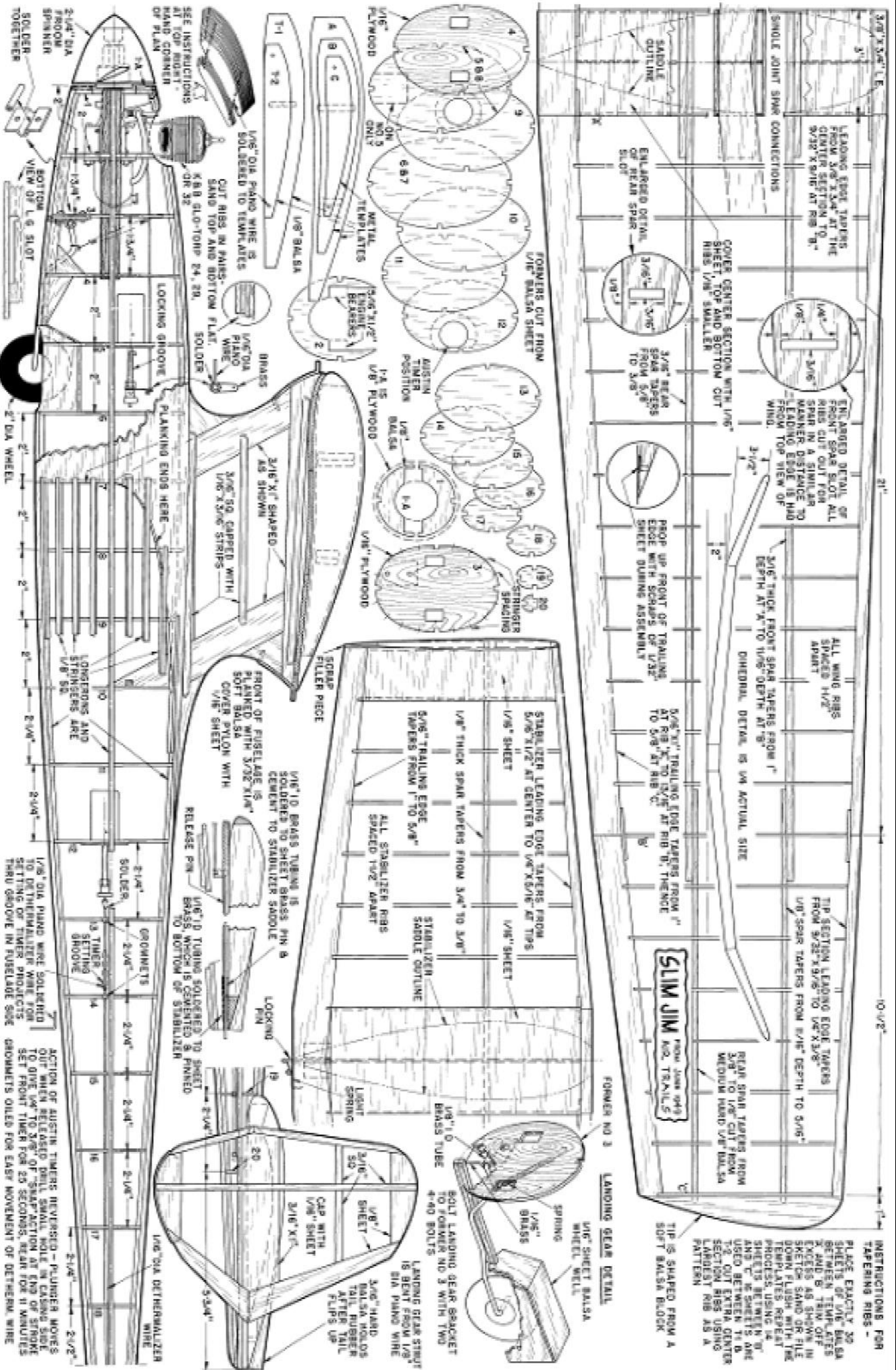
If you let it sit a few weeks or a month before you use it, it will work better, idle better, and have a little more on the top end.

Castor oil has fats that solidify after few weeks with the physical aspect of white specks that form a sediment in the bottom of fuel container. That sediment tends to accelerate varnish formation in your engine.

That sediment is hard to filter.

I use the procedure shown below to separate sediment in my home brew fuel. Thermals. Alfredo.



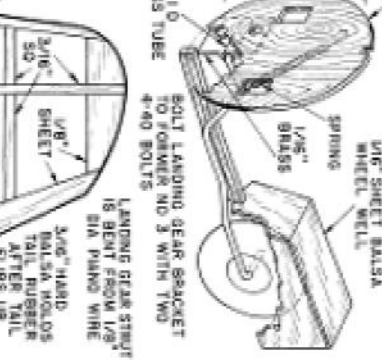


PDF plan available from: http://www.outerzone.co.uk/plan_details.asp?ID=1183

INSTRUCTIONS FOR TAPERING RIBS - PLACE EXACTLY 20 SHEETS OF 1/8" Balsa BETWEEN TEMPLATES A AND B. TRIM OFF IN ENDS AS SHOWN IN BOTTOM VIEW OF PLAN. BE SURE TO SET THE TEMPLATES EXACTLY TO THE PATTERNS USING 1/8" SHEETS BETWEEN OR ANS. C. RIBS ARE USED TO CUT EXTRA CENTER SECTION RIBS USING LARGEST RIB AS A PATTERN.

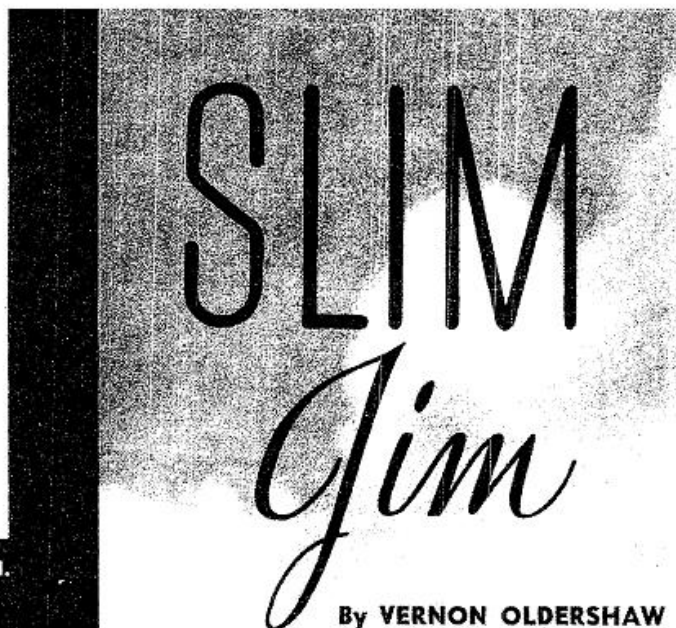
ACTION OF AUSTIN TIMERS REVERSED - PLUNGER MOVES OUT WHEN RELEASED. SMALL HOLE IN CASING SIDE TO GIVE UP TO 3/8" OF "SNAP" ACTION AT END OF STROKE. SET FRONT TIMER FOR 25 SECONDS, REAR FOR 11 MINUTES. GROMMETS OILED FOR EASY MOVEMENT OF DETHEMALIZER WIRE.

SLIM JIM
NO. 208
AND TRAILER





● Author Oldershaw and his C1, B or C pylon model.



"GIVE us something new!" cry the free-flighters. Here is my answer to that plea. We don't claim that this model will do everything, but it does have a lot of ideas and theories incorporated into it - ideas and theories that have been proven by those who know the thrill of modeling - designing your own ship.

The fuselage is long and slender like a pencil bomber but for the sake of appearance it is a little larger in diameter than a true pencil bomber. It is equipped with a spinner, retracting landing gear, and a narrow pylon giving a fast, sleek look to the ship.

We are using a Glo-Torp engine which eliminates the necessity of trap doors for batteries and the inconvenience of coils, wires or protruding timer arms. The Glo-Torp is very easy to start with the proper fuel, and shows a good output of power. Any glow plug engine of comparable displacement may be used, such as Ohlsson .29, McCoy .29 Sportsman, OK .29, and the like.

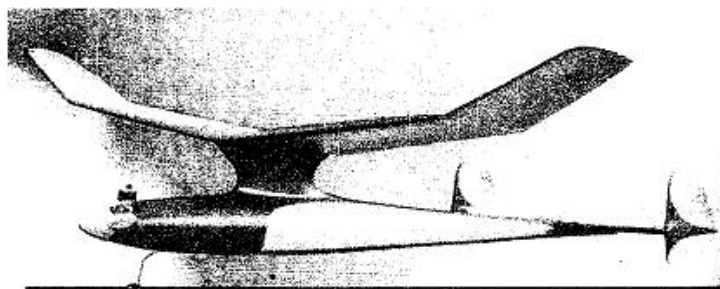
The wing has an aspect ratio of 8.4 to 1 with 500 square inches of wing area. A taper was used to obtain greater strength and more efficient performance. The square tips make construction simple. The airfoil is a hybrid of the Davis foil used on a number of ships by the author. The high point is located about 33% back and has a maximum thickness of a little over 15%. This percentage thickness runs from the center to the start of the polyhedral, from there to the tip it decreases to a thickness of 11% of the chord length. This decrease in thickness of the tip gives the same effect as an elliptical tip with much simpler construction. The author has done a great deal of experimenting with various airfoils and has found the thick foil the most satisfactory. The thicker foils give a definite increase in stability besides make room for deeper spars.

The stabilizer has an area equal to about 30% of the wing and uses a Clark-Y airfoil. The twin rudders give a distinctive look to the model and result in improved performance especially in a quick recovery from a very fast climb. The area of the rudders is $11\frac{1}{2}\%$ of the wing and there is no indication that they are too large. Of course, with twin rudders an increase in area of about 25 to 30 percent over a single rudder is necessary because of loss of efficiency due to tip vortices. On previous models using these airfoils it was discovered that rudder area must be about 9% for good stable flight so allowing for the proper increase for twin rudders, the $11\frac{1}{2}\%$ area was used on Slim Jim. The original (lost on an 8 second engine test hop at the Nationals) certainly proved that the design will give top contest performance. The second one confirmed all our hopes.

The model is not difficult to build and even the novice should have no trouble with its construction. The fuselage is built by the crutch method with the bottom half being built first. The four front bulkheads may be assembled whole on the hardwood engine mounts and then allowed to protrude over the end of the board where the crutch for the rest of the fuselage is being built. Be sure that the engine mounts are drilled and the hold-down plates are in place before all planking is put on. Put on all stringers tapering to fit at the rear of the fuselage and aligning them up by sighting along the length of the fuselage. Add the landing gear and dethermalizer timer before proceeding with the top half. Also put in the wheel well. You will notice that the spring that retracts the landing gear pulls to the right side of the center. This pressure plus the vibration of the engine is what releases the landing gear from its locking groove. Build the top half of the body to the bottom.

The cowl is cut out after the planking is complete. Fit the cowl to the engine used. Cowl extends back to former 3 and its bottom is even with tops of engine bearers.

The dethermalizer timer and engine timer are both reversed for convenience of operation in their respective jobs. The front timer actuates a K & B Shur-Stop fuel cut-off device. Remove the top of the Austin timers by filing the eyelets that hold the fibre top to the aluminium body and pull out the plunger. Reverse the plunger leather and place the spring at the bottom of the aluminium case. Before assembling, drill a small hole in the side of the case so that air can enter



Free-flight models can have lots of eye appeal as this fine example indicates

allowing the plunger to jump near the end of its motion. This fast action should be about $\frac{1}{4}$ of an inch. Use 1/16" grommets to hold the timer together.

The dethermalizer timer does not push the dethermalizer release wire until it has started this fast action. This allows the timer to operate consistently because there is no increase or decrease in pressure along its entire run. The fast action of the timer pushes the locking pin out of the 1/16" tube thus releasing the stabilizer. Be sure a strong thread stops the stabilizer at about a 40 degree angle.

The ribs for the wing and stab are made by the same method. My brother and I first used this method in 1938 and have never found a faster or more accurate way to cut out ribs. In making ribs for a tapered wing one must be sure to have the exact number of ribs required for both wing panels. Also the center template must be one size larger than the largest rib used. A 1/16" piano wire soldered to the templates has been found to be very satisfactory besides being readily available to the modeller. The templates are pressed tightly against the sheet balsa and then soldered in place. First rough in the ribs with a knife or block plane then finish with a file or sandpaper making certain that all the ribs are flush with the top of the templates. Unsolder and cut the ribs in pairs as shown of the drawing. The notches for the spars are cut as shown, that is, up from the bottom and down from the top, the distance back from the leading edge being determined from the wing plan.

The rudders are very simple and only one comment is needed here. As the rudders must carry the shock of landing and the vibration of the engine they should be made of fairly hard balsa.

The Slim Jims that have been built have weighed 28 and 30 ounces each with the centre of gravity just right on the first one and only about a half-inch too far forward on the second. The CG was changed by adding a little extra colour dope to the stab. The weight of the model can be increased in this manner so that it can qualify under AMA rules for the Glo-Torp 32 and thus can be flown in both class B and class C. Small weights may also be used in balancing. One other important adjustment is in the difference in incidence between the stab and the wing - this is between 9/16" and 5/8". The CG is at the rear spar.

Before that first power flight, glide the model until you are thoroughly familiar with its gliding characteristics. Careful analysis of a model's glide may save a great deal of repairs and washed out ships. Be sure to test the incidence and CG before launching under power.

A word on how to test with a glow-plug-equipped model before giving it full power. This idea comes from the Thermal Thumbers club and really works. It is done simply by cementing a stick along the back of the prop thus reducing the thrust by making the prop inefficient! Sand or cut the stick down for each boost of power desired until the prop is smooth again.

Start with a 1/8" square stick.

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From SAM 26 Newsletter

samrcflier@verizon.net Editor Bob Angel

HIGH TENSION LEADS are fond of releasing themselves from the coil. Statistics have shown that this happens most often if the coil is buried in some inaccessible spot. Dick Fischer posed the following question.

"Why is it that Modelectric and some other spark coils have little if any "indent" on the hi tension post for retaining the clip on the spark lead? I have a couple of coils with this deficiency and have tried various fixes, none entirely satisfactory.

Solution #1 Solder the lead to the post. But that compromises the ability to install and remove the coil at the field. And I'm always afraid of damaging the coil innards.

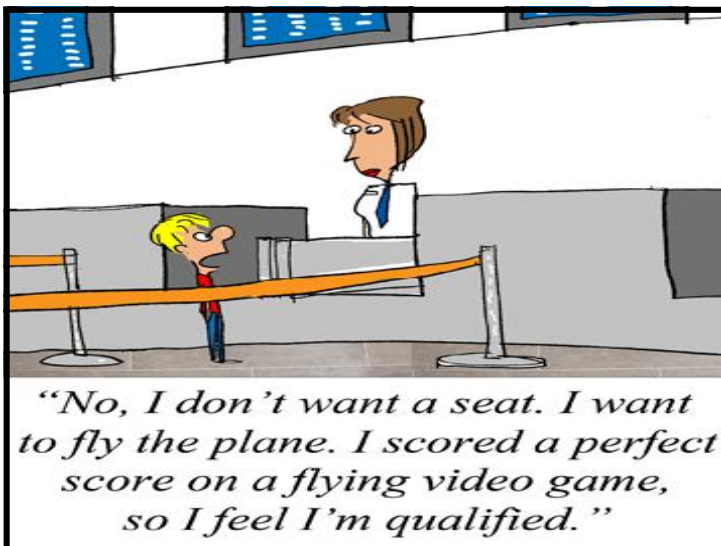
Solution #2 Wrap the coil and retaining clip with tape. I've done this on several models using plastic electrical tape. The clip won't come loose, but over a period of time the tape becomes gooey and leaves the coil a mess when you remove the tape. Also, it's sometimes difficult to access the coil for wrapping / unwrapping tape. Not entirely satisfactory.

Solution #3 Wrap the coil and retaining clip with a rubber band. This idea works quite well except that the rubber band sometimes has to be passed over electrical wiring. And, if your model lasts long enough, the rubber band will eventually deteriorate and fall apart. Not entirely satisfactory.

Solution #4 Wrap a string around the coil and clip and tie a knot. This is my current favorite fix. It's not messy and it will last the life of the model. Only problem is getting both hands down into the fuselage to tie the knot. But in most cases you can pull the coil part way out of its resting place for better access while tying the knot. I use the flat, waxed tie cord that's used for rib stitching full scale airplane wings. It's also used for tying up wire bundles in full scale airplanes. You don't have to "put your finger" on the first overlap while making the second half of the knot. Almost satisfactory.

Solution #5 This is where the readers come in. Any great ideas?"

Dick, If I'm allowed to jump in ahead on ideas, here is mine. Small plastic tie wrap. You can usually get one wrapped around the coil using fingers and forceps or tweezers if necessary. And they're long enough that you can engage the two ends to tighten. Also you can snip them loose if you need to redo anything. Bob Angel - OK does anybody else have an idea?





CHAPTER 84

Mount pleasant field

Old Timer flying in Queensland

A lot has changed with the hobby of aeromodelling, even the category, some now call it a sport. Not surprising when most entering the ranks these days only have to glue a few pieces of foam together. Don't get me wrong, I have my share of ARF models. When I want to fly a sports model, I don't need to risk something I have spent months building. However, I would say to all those who don't know the pleasure of watching a model you have created defying gravity, you really are missing something.

"There is nothing more certain and unchanging than uncertainty and change." ~ John Fitzgerald

It is certainly easier to get into model aeroplanes these days. And no one could suggest the boundaries have not expanded with electric, turbines, giant scale etc. Even free flight models (where it all started) if you want to be competitive, it's all carbon fibre, computer programed, high tech. creations, easier to buy than to build.

That is why the Old Timer category was started. You will find examples in most model flying competitions, radio control, free flight and control line. It can be treated as entry level for those who don't want the high tech. but it requires an understanding of building, aerodynamics, engineering and how things work.

The radio control Old Timer movement was started in Queensland by the Vintagents club, SAM 84. To the right is an extract from our web site "Understanding SAM". We fly on a farm at Mount pleasant, very close to our original field at Dayboro. There is a calendar of events on our web site www.vintagents.org however the field is only available to club members and invited friends, so you will need to email us at h-art@bigpond.com if you wish to visit or take part.

S.A.M. The Society of Antique Modelers came into being some forty years ago. Now with worldwide chapters, it was formed by those who had a special appreciation of the early models that paved the way to the technically advanced machines available today.

So, what is so special about Old Timers, you may ask. Speaking for myself, they fulfilled a need that current models are unable to supply. Because these early machines were nearly all freeflight models, they had flight characteristics that included stable and graceful flight. They actually FLEW on the wing, in contrast to being dragged along by brute force combined with the necessary speed required to produce the lift needed.

Quite simply, I was a little bored flying back and forth and wanted something different.

The essence of all Old Timer flying, is a soaring competition, where the last man down wins. And soaring is what these models do very well indeed. Strictly speaking, "Old Timer" refers to models designed from 1939 to 1942. Earlier models are categorized as "Antique," and the models from 1943 to the end of 1956 are "Nostalgia" models.

Arnold, Broese-van-Groenou August 2009



Left is an early winning team for the Frank Ehling international postal event for 15 A Old Timer models.

Front row left and centre are Des Slattery and Col Sommers, founding members of Vintagents and MAAA hall of fame members.

THE BACK PAGE



Unusual Models. Above is a Super Rocketeer powered by an ED Hunter.
Below is the bare-bones of an unknown Italian Glider.

