The Thermaleer

SAM 600 wins the International 1/2 A Texaco R/C Frank Ehling Trophy

The International 1/2 A Texaco postal comp trophy arrived from SAM 93 TULSA, USA. Reading the plaques attached, it appears to have been created in 1985.

The winners were :

1985/1986, Aeroneers, San Diego.

1987 SAM 30,

1988 SAM 27,

1989 SAM 56 Wichita, KS,

1989/1990 SAM 51,

1991 SAM 26 Lompoc, CA,

1992 SAM 56 Wichita, KS,

1993 SAM 27 Napa, CA,

1994 SAM 51,

1995 SAM 27 Napa, Cam

1996 SAM 26 Lompoc, CA,

1997 SAM 56 Wichita, KS,

1998 SAM 84 Brisbane, Australia

1999 SAM 21 SAN Jose, CA,

2000 SAM 51 Fair Oaks, CA,

2001 SAM 40 Highland, MI,

2002 SAM 93 Tulsa, OK,

2003 SAM 600 of Australia

President's Report:

Hi Folks,

Hi folks, due to bad weather Leopold was cancelled, unfortunately this seems to be the norm lately.

I have managed to get a few more prizes for our Easter comp for Swan Hill, Bolley Props, B&W 1/2A Model Kits, etc. Also, don't forget our Comp in Cohuna on the 20th and 21st of March.

Then Swan Hill at Easter, hope to see more flyers at these comps. I also hope to see a better turnout at the next meeting as it has been four months since the last meeting

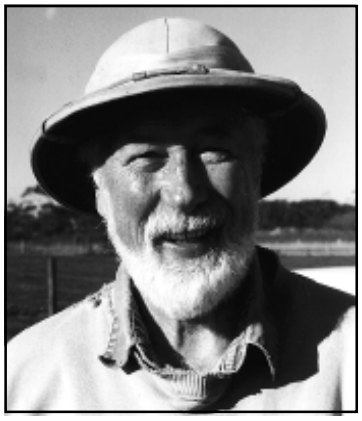
NEXT MEETING 25th OF MARCH. Hoping for calm weather.

Regards Chris.

Look Out!! *Beware SAM600 members who were unable to attend our Roy Robertson Memorial Trophy Contest on the 24th and 25th of January 2004.*

We all know the Graham Sinclair and the Mark Collins who are multiple winners of this event, but we now have a "Dark Horse" who achieved five Max's and 16 minutes 56 seconds in a fly off. Norm Campbell, Congratulations.

Meeting #89/90 Thurs 25th Mar., 2004 7:30pm
Saturn Hobbies, 17 Ardena Ct., Bentleigh East.
(Melway 68 J-12) off East Boundary Road.
Meeting # 91, Thursday 27th May, 2004
Meeting # 92, Thursday 22nd July, 2004
Meeting # 93, Thursday 23rd Septmber, 2004



Editor's Column:

Not wishing to prolong the Playboy Cabin discussion I must report receiving the following letter from one of our members, Gerard Power of Lancefield, Victoria.

"Dear Peter, Have been following your discussion in "The Thermaleer" re the Playboy. Enclosed photocopies from John Pond's column in Model Builder of August 1992 may help, (or hinder).

No. 2 photo shows the Playboy Cabin by SAM President Jim Adams- flown at SAM Champs- so it passed scrutiny. Clearly shows rounded windscreen and ONE dowel for wing bands.

The D.T. Page 15 of July/August 2003 shows 2 dowels. So what ? Trevor in Queensland seems to have a dose of paranoia.

However, to John Pond, the drawings of pylon and cabin model measurements are of interest. The diagram of relative climbs and times of aerofoils is different, falling down as is only computer result. If it was feasible we could fly by feeding info into a computer. No fun.

Far more relevant (in D.T. 124 September) also page 15, "Bits and Pieces" was Hank Baer's trim settings for the Playboy. Won't post this before Christmas, after would be safer. Hope this has been useful, a late Happy Christmas,

Gerard Power, SAM 600, Lancefield.

PS: From memory, the aerofoil data has been in either D.T. or The Thermaleer some years ago."

The Editor seeks clarification re legal configurations of the Playboy Cabin from SAM 600, MAAA & SAM 1788.

Not a happy sequence of events for the Old Timer movement in Victoria. I refer to the unfortunate history of VMAA State Fields or fields in which member's money, including those who belong to SAM 600, has been invested.

First we had Wangaratta Drages Air World. This promised to be the centre for sports aviation in Australia. Alas, through a combination of circumstances this was not to be. After several highly successful and well attended Old Timer Eastern States Gas Champs it was closed. People lost money amongst which, I understand, were, indirectly through their fees, aeromodelling members.

Then we had the Twin Cities field at Albury, NSW, which was improved and updated for the MAAA Nationals hosted by the VMAA and funded, I understand by a loan from the VMAA to the Twin Cities Club. At that VMAA nationals the Old Timer movement had to find a suitable field themselves. Pattern and Scale seemed to take precedence. SAM 600 has subsequently held an Old Timer competition at the Twin Cities field. I understand we are not welcome back and may never fly there again. The reason; we did not spend enough at the canteen. So much for our fees at work.

Finally we have the all-new Victorian State Flying Field at Darrawiet Guin, recently opened with great fanfare and shown on our SAM 600 Contest Calendar as the location for the 2004 Old Timer State Champs. (We moved from the Haddon Field at Ballarat, our wonderful long-time hosts for this event, to support the State Flying Field). Well, it appears that the VMAA State Flying Field is right under the flight path of commercial passenger jets with a limited ceiling height for models. Not suitable for Old Timers. We cannot fly there. How is this possible ? Where was the pre-planning ? Well, back to Haddon if they will have us. This is just another example of lack of consideration towards SAM 600 members and part of our fees being used to our disadvantage.

It must a thankless task being on the committee of the VMAA, the members of which do such a good job in so many areas, and for this they deserve our thanks. What a pity we are in this situation when our neighbouring States have such excellent flying fields at Cootamundra (NSW) and Constellation (SA) both of which are excellent for flying Old Timers and where we are always welcome. Unfortunately we cannot return the hospitality.

If you want to be really looked after I suggest you take up Scale or Pattern or perhaps Lawn Bowls.

(The above views are those of the Editor and do not necessarily represent those of the SAM 600 Committee or members.)

Vale Leo O'Reilly.

The following sad message has been received from Chris Carpenter via Peter Leaney, both of South Australia.

"It is with great sadness that I wish to inform everyone that has known Leo O'Reilly, that he passed away peacefully this morning Monday the 2nd of February 2004 .

Leo was a well respected modeller and astute businessman and was a leading force in putting aeromodelling - not only as a hobby but a sport - on the map within Australia.

Leo will be sadly missed by all that new him and his contribution over many years to the aeromodeling fraternity will always be appreciated.

I'm sure you'll join me in sending our heartfelt sympathy to Claire, Mike and David on this very sad day."

Editor's Column *..continued*

There has been much discussion on SAMTalk recently regarding the Lanzo "Bomber" and the exact date of its creation and whether or not it should really be legal for Antique, that is, pre December 1938. I have been holding a letter I received from Leo O'Reilly dated September 1997 regarding his views and contentions on the Chet Lanzo "Bomber".

Whilst both SAM USA and the various SAM Chapters in Australia, including the MAAA, all accept the credentials of the "Bomber" as being legal for Antique, although not for Texaco in Australia, it is worth placing on record Leo's point of view.

This also serves to recognize the passion and commitment Leo had toward the Old Timer movement. So, from the pen of L. O'Reilly comes a definitive statement, and I quote:

"**The Lanzo Bomber**

There has been much debate about the eligibility of the "Bomber" for Texaco events.

The July 1997 issue of "Aeromodeller" contained an article in "Vintage Corner" about the introduction of pylon models. This article indicates that Andy Anderson produced the first pylon model in 1937. This was followed by the "Valkyerie". Goldberg worked on the "Zipper" design in early 1938 and he and Anderson competed in the 1938 Detroit Nationals (6th -9th July). A modified model won first place in a contest on the 4th August.

Comet advertised the "Zipper" in July 1939 after a year of testing with 10 experimental pylon models.

There is no mention of the "Bomber" in any of these articles.

There is no photograph or reference to the "Bomber" in either MAN or Air Trails in all issues from 1938 to 1942.

The "Record Breaker" plan was published in MAN in August 1939.

In the attached article Chet Lanzo states 'during a recent gas duration contest...'

If he had designed the "Bomber" prior to December 1938 why would he be publishing and boasting about the "Record Breaker" in August 1939.

The available evidence fairly clearly shows that the "Bomber" does not meet the criteria for Texaco models.

Has anyone evidence that it does ?

Leo O'Reilly, 21st September 1997"

Well, gentlemen, Leo has as long ago as 1997 cast significant doubt upon the legality of the "Bomber" for the Texaco event based on it not qualifying as pre December 1938. This information and contention will not change anything, either here in Australia or in the USA.

But, it gives food for thought as to how this all came about. Who and why and when ?

MINUTES OF SAM 600 ORDINARY GENERAL MEETING 27th November 2003.

Meeting Opened: 7.32pm.

Apologies: Peter Bennett, Trevor Boundy, John Whitaker and Barry Barton.

Visitors: Nil.

New Members: Nil.

Attendance: 15.

Minutes of Previous Meeting: Accepted as Published.

Moved by Brian Dowie that the minutes as published be accepted. Seconded, Don Cameron. Carried.

Business Arising from Minutes: Nil

Treasurers Report: Read* by Norm Campbell: Bank Balance as of 22/11/03, $2,907.48.

(Mark Collins and Bob Harman queried their financial standing as neither received a Newsletter).

Moved by Bob Harman that the Treasurer's report be accepted. Seconded, Bernie Halstead. Carried

Correspondence In: Nil

Correspondence Out: Nil

General Business:

- Christmas raffle held over till January Meeting because of insufficient sales.
- Meeting advised of 1/2A Texaco postal competition win by SAM600 and we will be hosting the event in 2004.
- Members were advised that at next years Roy Robertson Memorial Trophy on Saturday 24th we will be sharing the field with P&DARCS Club members while we fly 1/2A Texaco and '38 Antique. We will be given first use of frequency board.

  Sunday 25th Texaco and Duration.
- MRCAC Westburn fly-in (January 11th 2004) will also include Nostalgia.
- The President of Swan Hill Model Aero Club has advised that their flying field has been made available for approx the next ten years for our SAM600 Easter Fly-in.
- VMAA State Flying Field cannot obtain a height clearance suitable for our Victorian State Champs so we are seeking another location.
- BAI (Haddon) are running a postal competition on Sunday 7th December.

  This is open to all pilots that attended their fly-in on the 15th/16th November.
- Mark Collins distributed his proposed Duration engine run allocations rule changes for our comments and publication in our newsletter. This is to be discussed further at our next meeting.

Meeting Closed: 8.30pm.

SAM 600 *TREASURER'S REPORT 22/11/2003

Opening Balance 25/09/2003:		$2,815.83
Income:		
Membership fees:	$50.00	$2,865.83
Expenses:		
F. Stebbing -		
Postage for Newsletters	$34.95	
J.Whittaker -		
Books for Book-keeping	$12.97	
F. Stebbing -		
Postage for Newsletters	$38.20	
Posh Printing-Newsletters	$118.75	
Christmas Hamper	$53.48	$258.35
Book Balance:		$2,607.48
Competition Proceeds:		$300.00
Bank Balance at 22/11/2003:		$2,907.48

OLD-timer rules change proposals tabled by Mark Collins 27.11.2003 for comment on, and by, members. New rules proposals are:

DURATION

5.4.4.4. (a) ENGINE RUN ALLOCATIONS.

New (i) all Schneurle or p.d.p. Engines (glow, diesel, spark Ignition) fitted with effective muffler. 25 seconds.

New (ii) all four stroke engines. 30 seconds.

New (iii) any engine defined as antique (glow, spark ignition, or diesel) fitted to an aircraft with a wing area less than 170 sq. inch per 0.1 cubic inch of engine capacity. 25 seconds.

New (iv) all post 1950 cross-scavenged, or factory manufactured plain bearing Schneurle ported engines fitted with an effective muffler and in an aircraft with a wing area of more than 200 sq. inch per 0. 1 cubic inch capacity. 30seconds.

Existing (v) any engine defined as antique (glow, spark ignition, or diesel) fitted to an aircraft having a wing area greater than 170 sq. inch's per 0.1 cubic inch of engine capacity. 30 seconds

NEW ***General rules.***

(i) There will be no restrictions on pumps or pressurised fuel systems for four stroke engines. (30 seconds.)

(ii) Allow four stroke engines capacity to be equivalent to .65 cubic ins when using the 60 % wing area rule formula.
Eg. .65 ci = 1.08 ci ins. Four stroke.

Editor's Announcement.

I have been the Editor and Publisher of the SAM 600 Newsletter "The Thermaleer" for the past six years, from issue number 56 to this current issue number 89/90. A total of 34 issues.

I feel the time is right to hand over the task to someone else. So, to that end, I give notice that I will not be standing for election to the Committee of SAM 600 and will stand aside as Editor.

Haddon

A Social Triumph - but a flying debacle. (15th& 16th November 03)

Gusting high wind on both days shut down the first meet of the 03-04 flying season.

Haddon has played host to the OT movement since the 49th Nats, which were held at their field, the State Titles have found a home there until this season when they will be held at the new VMAA State field. (Ed; Note: This has been changed, Ballarat will once again host the State Titles at Haddon) will Even the organising club is beginning to question the wisdom of holding a springtime meet, though it was galling to them that the previous weekend was blessed with perfect flying weather.

The South Australian flyers; Peter Leaney, Dave Markwell & Ron Adamson made the scene but only Ron survived an attempt at Duration, Peter Leany's "Bomber" flipped on landing round one, broke wing & dislocated pylon. Many opted not to fly, including Roy Rob Champion Mark Collins who wisely didn't even bother to unpack.

1/2 A Texaco was attempted in even worse conditions with Snake Valley hero Steve Gullock claiming his first position in open competition, much to the delight of the locals. He claims that unremitting R&D was the cause. Many flyers ended up over the fence downwind, much distance from the take off, so we all retired to the "Cafe de Paddock" for Dave's superb country-style burgers.

Saturday night the traditional meal at the Snake Valley pub was up to & even better than usual both for the food & visual stimulation.

Day two dawned wet and windy, South Ossies packed up and left, your correnpondent left soon after. BB.

ALL DIESELS ARE SCHNEURLE-PORTED! SO ARE THOSE SUPER TIGRES WITHOUT THE BAFFLE! AND THOSE COX ENGINES! IF IT DOESN'T HAVE A BAFFLE ON THE PISTON, IT'S A SCHNEURLE! and so on…....

Remarks such as those above sound silly to most of us, yet we still hear them from ill-informed modellers whenever engines are discussed.

With a few exceptions, the rules adopted for SAM and MAAA Old Timer events specifically bar the use of 'Schneurle-ported (and Perry-ported) engines'. Why is this so, given that 'Schneurle-porting' is not a new system, but rather an old form of cylinder scavenging devised for 2-stroke engines by a German engineer, Dr. E. Schneurle, as long ago as 1925!

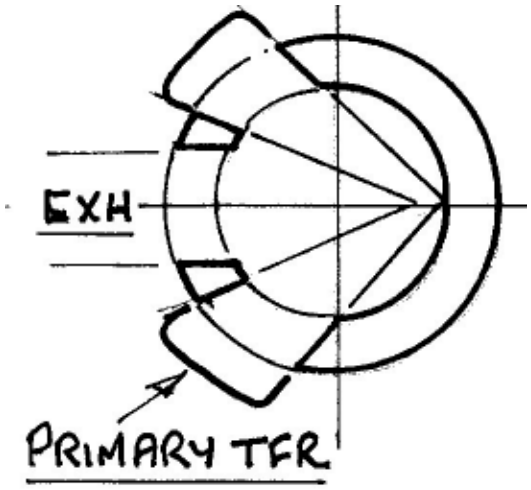


FIG.1

The simple answer is that, although Wisniewski had won the FAI World Speed Championship in 1964 with his Schneurle-ported K&B variant, Schneurle-porting was virtually unknown in the model engine field until 1969, when it was adopted by the brilliant Paul Bugl in his ground-breaking engine designs for HP, the Austrian firm. Formerly better known for high-class munitions, but latterly interested in the application of model size engines to military drones, HP hired Bugl as a consultant following his demonstrated ability to design and race his world-class Bugl team race engines.

This gave the first Schneurle-ported HP .40 and .61 engines a dramatic increase in efficiency, enabling them to challenge the power outputs of the hitherto best racing engines, but delivering this power at more normal and useful engine speeds, say in the 10-14,000 rpm range. Model engine designers around the world immediately turned their attention to the development of Schneurle-ported engines to replace the earlier porting systems which had been the mainstay of 2-stroke engine designs since the early 1900s.

It had initially been the aim of Old Timer rules to encourage the flying of models designed before the mid '50s (actual cut-off dates obviously depend on specific events) and to power those models with contemporary forms of model engines. The appearance now of a super powerful type of engine would render the use of older engines a waste of time, as the majority of events classified eligible engines by displacement. As a rule-maker, I supported the non-eligibilty of Schneurle-ported engines in Old Timer events and in a general sense believe this ban should continue.

But what is a Schneurle-porting and how can we decide if a particular engine has this form of porting?

Dr. Schneurle's original Schneurle loop-scavenging method was patented in 1925. A single exhaust port was flanked on either side by a transfer port which directed the incoming charge away from the exhaust and towards the opposite cylinder wall. (see Fig.1) Depending on the angle of these directional ports, the two incoming streams collide at a point past the centre of the piston and travel towards the far cylinder wall, where they travel up in a loop, through the combustion chamber and down the cylinder wall on the other side, exiting through the open exhaust. (see Fig.2) Note that there is no baffle on the piston, most pistons being flat-topped, although some designs utilise a slightly domed top.

This Schneurle-port system of cylinder scavenging was more efficient than earlier forms of loop-scavenging which used a transfer port

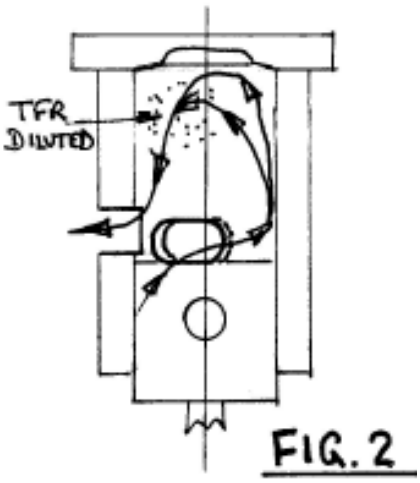


FIG. 2

opposite the exhaust and a baffled piston in an attempt to deflect the incoming charge from going straight out the exhaust. (see Fig.3) In these earlier systems not only was much of the transfer charge diluted and lost in the outgoing exhaust, but the baffle on the piston precluded the use of efficient combustion chamber design. In addition to this, the piston face area was increased, increasing the possibility of the piston overheating. The Schneurle system overcame all these earlier faults and the result was considerably higher specific outputs and lower specific fuel consumption.

Schneurle's work found particular application (notably DKW) before the 2nd World War in small 2-stroke motorcycles, where both power and economy were at a premium. After the war, DKW was re-constituted as MZ in East Germany. In 1957, Dr. Walter Kaaden of MZ added a third transfer port, opposite the exhaust.

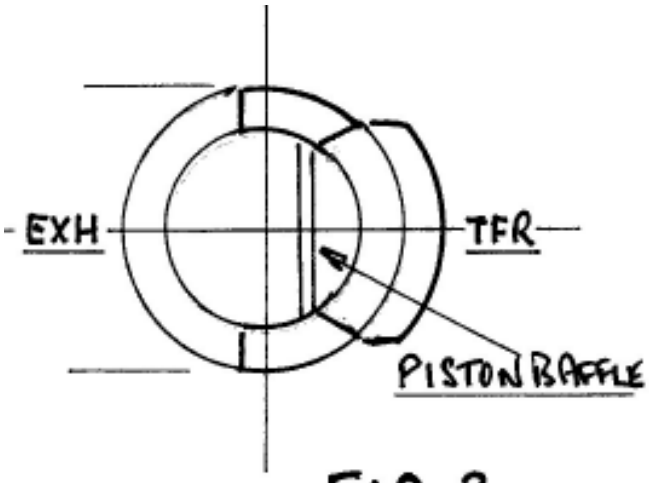


FIG.3

(see Fig 4.) This port was angled steeply upwards (45-60°), its function being to assist in the deflection of the primary transfer charge up the cylinder wall. It is this third port, or three-port Schneurle system which is commonly used today in model engines.

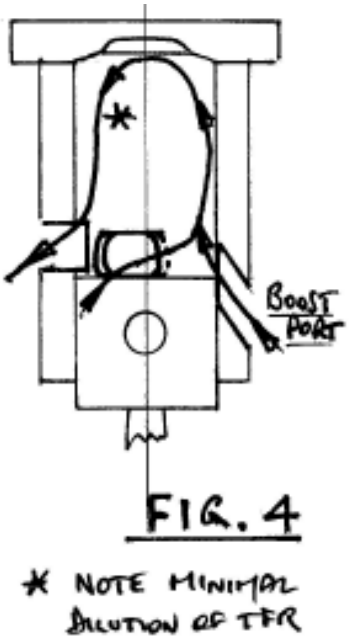


FIG. 4

Very recent engines for competition use may have a further two (called a five-port) or even four (called a seven-port) secondary transfer ports in the cylinder wall and some 2-stroke motorcycle engines may have additional small exhaust ports, called 'sub-exhaust' ports. (see Fig. 5 composite)

But it is the common (three-port) Schneurle engine, defined by a single small exhaust port, flanked by two directional transfer ports and with a third angled boost port that concerns us. (see again Fig. 4)

Note that the single exhaust port occupies no more than 20% of the cylinder bore circumference in most designs, represented by an arc of roughly 72°. (It may be divided by bars into more than one hole. This is for reasons of rigidity, or to prevent a piston ring extruding or falling into the port, or to prevent piston scuffing)

Note that the primary transfers are located close to and on the same side of the cylinder wall as the exhaust port and that they seldom extend

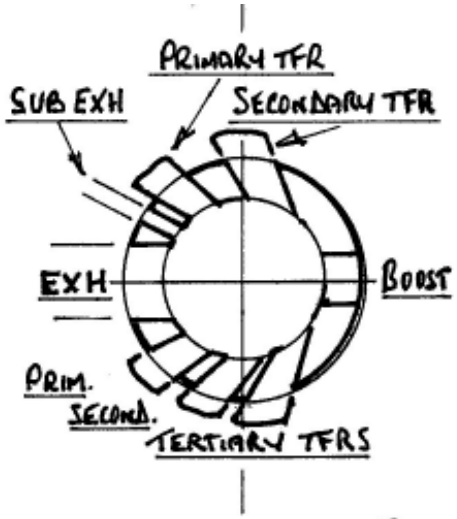


FIG. 5

much over the centre of the piston.

Note that the primary transfers oppose the exhaust flow. (They may also be angled upwards slightly).

Note that the single boost port is directly opposite the exhaust port and is angled steeply upwards.

These are the defining characteristics of the common three-port Schneurle engine!

The earlier loop-scavenged Super Tigre has one (split) large, angled transfer window *opposite* the large exhaust and a baffle-less piston. This was the patented ST porting. Some of the incoming charge is directed upwards, but much of it goes out with the exhaust, straight across the piston. It does not fit the definition of a Schneurle engine. (see Fig.6)

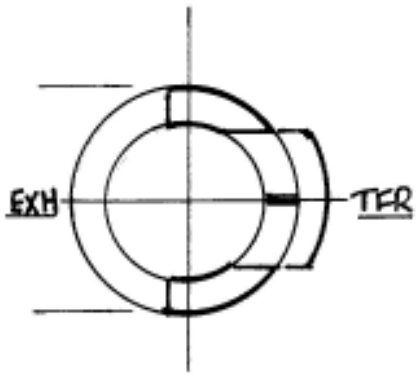


FIG. 6

The Cox engines have very large, twin opposed exhaust ports and single or twin transfer ports. Again, the transfer ports do not oppose the exhaust ports and much of the incoming charge is wasted. They are not Schneurle engines. (see Fig.7)

The traditional radial-porting system, common on many diesels, has three or four or more exhaust ports occupying as much as 60% of the cylinder wall and a myriad of transfer configurations opposite those exhausts. One could argue that generally each exhaust port is flanked by a transfer port, which *opposes* the adjacent exhaust flow. However, since these radial displaced porting layouts are primarily symmetrical, the transfer charge is largely directed *towards* an exhaust port. Despite the common use of tapered piston crowns, it is the collision of opposing transfer flows which results in a fair proportion of the incoming flow being directed up into the combustion area. Much is still lost straight out the opposite exhaust port. Radially- ported cylinders , whether applied to diesels or glow engines, are not a form of Schneurle porting. (see Fig. 8)

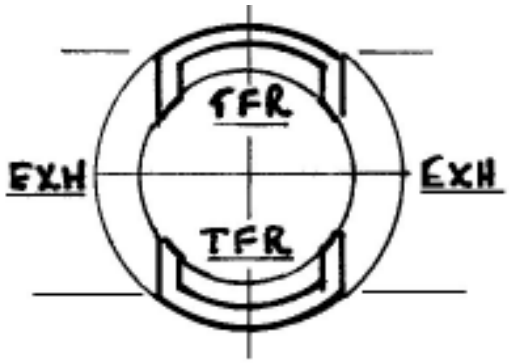


FIG. 7

Similarly, the Enya 15D and early MVVS Diesel transfer porting cannot be considered as a proper form of Schneurle porting. Very large exhaust ports were used and the primary transfer port placed in the opposite cylinder wall had very little directional effect, despite being fed by separate passages. (see Fig.9)

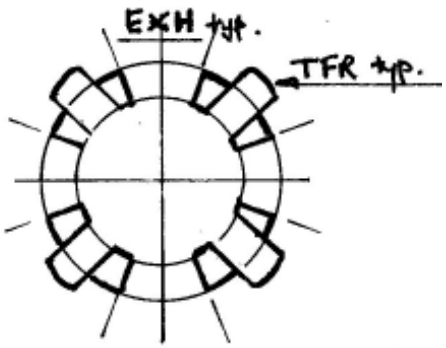


FIG. 8

The claim that 'all diesels are Schneurle-ported' is obviously erroneous. Some diesels may be, but they are the Schneurle-ported ones!

Why is Perry-porting lumped in with Schneurle-porting?

It was obvious by the early '70s that

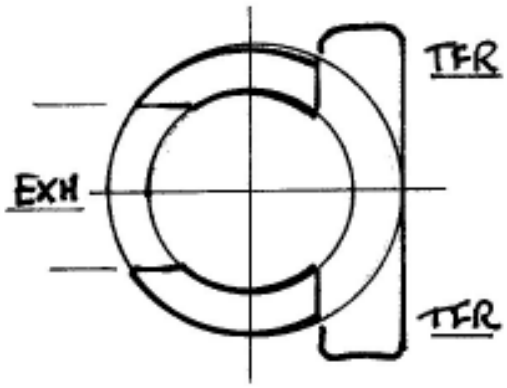


FIG. 9

Schneurle-porting was the way to go in engine design. However, complexities were introduced in the manufacture of a Schneurle engine, particularly in the crankcase.

It was bad enough having to withdraw a single bypass core during casting, but now it was three times harder. Gordon Burford overcame the casting problem with a split crankcase design for his 2.5cc and 3.5cc Taipan glows. A perfectly workable solution to the problem, it was promptly copied by Cox for their new Conquest .15 glow!

But John Perry, an innovative American engineer, devised and patented a porting system which could be used on existing baffle-piston glow designs. (see Fig.10) It was bought by several manufacturers, including K&B, HB and even Super Tigre, who added it to their already patented ST system. The Perry-porting system was an adjunct to the engine's existing transfer port and consisted of two very small directional ports flanking the exhaust. In other words, it was similar in effect to the primary transfer ports in a three-port Schneurle.

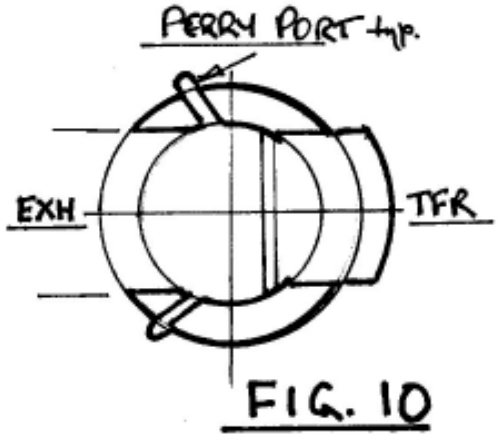


FIG. 10

The addition of Perry-porting resulted in an efficiency gain, not as great as that of a proper Schneurle system, but allowing the use of existing crankcase dies with minor additional machining. Perry-porting was included in the ban on Schneurle-porting because it offered a noticeable increase in performance over existing engine designs.

To conclude, it is not difficult to properly identify those engines which are Schneurle-ported as distinct from those which are not. To argue mindlessly along the lines of the opening remarks reveals little understanding of the subject.

This article was reprinted from the SAM 1788 Bulletin "Duration Times" #125 by kind permission of the author, engine expert David Owen and DT's Editor, Ian Avery.

David's email is <owendc@1earth.net>

18th Roy Robertson Memorial Trophy
January 24th & 25th at P&DARCS

Texaco

Freq	Competitor	Model	Fuel	Engine	Score	Place
620	Mark Collins	Bomber	21cc	OS 60 F/S	4239	1
641	Fred Stebbing	Rambler	8cc	OS 40 D	3783	2
631	Kevin Fryer	Bomber	10cc	Irvine 40 D	3602	3
28	Chris Lawson	Lanzo Racer	12cc	OS 40 F/S	3535	4
641	Norm Campell	Airborne	21cc	OS 60 F/S	3385	5
34	Peter Hosking	Bomber 85%	15cc	Saito 65 F/S	3343	6
605	Peter Bennett	Bomber	18cc	OS 60 F/S	3306	7
30	Robert Taylor	RC 1	15cc	OS61 F/S	3244	8
639	Brian Laughton	MG 2	15cc	OS 40 F/S	3128	9
14	Steve Gullock	Dallaire	15cc	Enya 46 F/S	2890	10
643	Ian Robinson	Bomber	21cc	OS 60 F/S	2541	11
16	Barry Barton	Anderson Pyl	21cc	OS 60 F/S	2400	12
32	Don Cameron	Record Brk	18cc	OS 61 F/S	2266	13
635	Danny Missen	Record Brk		Enya 53 F/S	DNF	

'38 Antique

605	Peter Bennett	RC 1	1.5	OK Super 60	1800	1
28	Chris Lawson	Scram	1.28	OR 60	1601	2
16	Barry Barton	Yankee Clipper	2.25	Burford 5ccD	1599	3
32	Norm Campbell	Airborne	1.3	Forster 99	DNF	

1/2A Texaco

16	Barry Barton	Stardust Special	Cox	1930	1
621	Brian Laughton	Red Ripper	Cox	1792	2
28	Chris Lawson	Lanzo Racer	Cox	1764	3
631	Kevin Fryer	Atomiser	Cox	1695	4
20	Peter Hosking	RC 1		1682	5
34	Don Cameron	Bomber		1582	6
643	Peter Bennett	Red Ripper		1510	7
641	Norm Campbell	Bomber		1308	8
635	Danny Missen	Stardust Special		1255	9
36	Fred Stebbing	Stardust Special		1096	10
18	Steve Gullock	Bomber		1075	11

Duration

620	Mark Collins	Cumulus	30 sec	McCoy 60	1403	1
631	Kevin Fryer	Cumulus	30 sec	McCoy 60	1331	2
28	Chris Lawson	Vespa	30 sec	McCoy 60	1310	3
30	Robert Taylor	RC 1	25 sec	YS 63 f/s	1217	4
637	Ian Robinson	Playboy	30 sec	Saito 65 f/s	1185	5
605	Peter Bennett	Josephine	25 sec	YS 53 f/s	826	6
635	Danny Missen	Bomber 70%	25 sec	OS 25	665	7
14	Steve Gullock	Dallaire 80%	30 sec	OS 52 f/s	663	8
621	Brian Laughton	Playboy	25 sec	Irvine36	604	9
16	Barry Barton	Playboy 110%	30 sec	Saito 65 f/s	566	10
641	Fred Stebbing	Playboy	25 sec	Thunder Tig 36	202	11
32	Norm Campbell	Super Quaker	25 sec	YS 63 F/S	DNF	

WebMaster's Report:

Over the last 2 months we have had 152 visitors to the SAM 600 web site.

I have had the responsibility of presenting the face of SAM 600 on the WWW over the last five years, taking over from Peter Bennett who pioneered our web site, prior to becoming editor.

I will not be making myself available for the position of web master at the next AGM.

TrevorB,

Webmaster SAM 600 of Australia

and author/publisher of the

FlyNet Model Recognition Page seen at

<www.boundy39.com> SAM359L

SAM 600 of Australia

Victorian R/C Old Timers Association (SAM 600) Inc.
(Special Interest Group)
Cordially invite you to attend and participate in our

12th Annual Swan Hill Easter Fly-In

Program of Events:

Good Friday 9th April, 2004

Registrations from 10:00 am

1/2 A Texaco	1:00 pm
2cc	4:00 pm

Easter Saturday 10th April, 2004

Texaco	9:30 am
Duration	1:30 pm

Easter Sunday 11th April, 2004

38 Antique	9:30 am
Gordon Burford	1:30 pm

Sunday night get-together
Commercial Hotel 6:30 pm

Easter Monday 12th April, 2004

Nostalgia	9:30 am

Presentation at the field following last event.
Catering at the field all four days.

Rules: MAAA 2002 as used at the last Nats.
e.g. Texaco fuels: 3cc per pound 4 strokes.
2cc per pound diesels.

Sponsors details:

Model Engines Australia	(03) 9569 4440
Saturn Hobbies	(03) 9759 7555
Tates Performance Hobbies	(03) 5222 4201
Rogers Radio Control Repairs	(03) 5222 5085
Model Draughting Services	(02) 6351 2513
Model Flight South Australia	(08) 8293 3674
Bolly Products	(08) 8255 9688
B&W 1/2 A Model Hobbies	1(260) 639 6510

All queries to **Chris Lawson** (03) 5275 8482
email <chrida@iprimus.com.au> or to

Peter Hosking (03) 5248 5461 email <peterh@webaxs.net>

SUPER GLUE the amazing story of CA glue, from A.A. Lidberg, SAMTalk Jan 2004

It's been used on elephant tusks, racing cars, space shuttles- even human wounds. It's cyanoacrylate, better known as superglue. Here's its story:

ACCIDENTAL INVENTION

Dr. Harry Coover was a researcher working for Kodak Research Labs in 1942. While trying to develop a clear plastic gun sight for use during World War II, he discovered something else: cyanoacrylates. But it was no good for what he needed-it stuck to everything, which created a huge mess. So he set it aside and moved on.

Nine years later Dr. Coover was working at the Tennessee Eastman Chemical Company. This time he was trying to find a tough polymer for jet canopies. While experimenting, he remembered the cyanoacrylate and wondered about its ability to refract light. A fellow researcher named (ironically) Dr. Fred Joyner spread a film of ethyl cyanoacrylate between two prisms of a refractometer. Not only did it not refract light, but it once again left a big sticky mess. And no matter how hard they tried, the two scientists couldn't pry the expensive prisms apart.

Embarrassed, they sheepishly told company execs about the ruined equipment. But instead of ridicule, they received praise-and orders to begin developing the adhesive for commercial use. Eastman Compound #910 hit the market in 1958, but initial sales were low.

Why? People didn't believe Eastman's claims about the. glue. So to prove its worth, Dr. Coover appeared on the TV quiz show "I've Got a Secret" and lifted host Gary Moore completely off the floor... using only a single drop of the glue.

HOW IT WORKS

Here's how it works: Cyanoacrylate, CA for short, is a highly reactive liquid, and when left to its own devices will quickly solidify. The addition of an acid stabilizer prevents the CA from reacting and keeps it in a liquid state.
When the acid stabilizer comes into contact with a catalyst, its stabil izing effect is neutralized. This allows the CA molecules to react with each other, forming long polymer chains. The catalyst for the acid stabilizer is hydroxyl ions, which are conveniently located in every molecule of water. So do you have to mix CA with water? No. Most surfaces already have a tiny bit of water on them. If they don't, there are always minuscule amounts of water available in the air. The water acts like a trigger, allowing the molecular structure of the CA to change. The molecules join up like a long series of popper beads. What was a thin liquid becomes a hard mass of molecular spaghetti noodles, bonding to whatever it contacts.

HELPFUL TIPS FOR USING SUPERGLUE

Make sure the parts being glued don't move at all during the formation of the chains. If so, the chain will break and the glue won't hold. A little dab'll do ya. Superglue bonds best when it's used at the rate of one drop per square inch. More than that requires a much longer bonding period, which may result in a weaker bond.

If you're gluing two flat surfaces together, rough them up with sandpaper first. That'll give the glue more surface area to bond to. But make sure you blow off any dusty residue first. Glued your fingers together? Use nail polish remover. Don't have any? Try warm soapy water and a little patience. Your sweat and natural skin oils will soon loosen the bond.

STICKY FACTS

Superglue is so strong that a single square-inch bond can lift a ton of weight.
Why doesn't superglue stick to the bottle? Because it needs moisture to set and there is no moisture in the bottle.
What's the difference between superglue and Krazy Glue? Nothing. Krazy Glue is just one of many brands available. It first went on sale in 1973. Some other brands: SuperBonder, Permabond, Pronto, Black Max, Alpha Ace, and (in Mexico) Kola Loka.

Cyanoacrylate products are a $325 million-a-year industry. Approximately 90% of U.S. homes have at least one tube.During the Vietnam War, tubes of superglue were put in U.S. soldiers' first-aid kits to help seal wounds. Special kinds of super glue are now used in hospitals worldwide, reducing the need for sutures, stitches, and staples. (It doesn't work on deep wounds or on wounds
where the skin does a lot of stretching, such as over joints.)
Superglue is now used in forensic detection. When investigators open a foil packet of ethyl-gel cyanoacrylate, the fumes settle on skin oils left behind in human fingerprints, turning the invisible smears into visible marks.

STICKY SITUATIONS

Lovers use it. An ex-con who violated his parole glued himself to his girlfriend so the police couldn't arrest him. An Algerian woman tried the same trick with her husband to keep him from being deported. Neither attempt was successful.

Pranksters use it. An Atlantic City man sued a casino after he got stuck to a glue-smeared toilet seat and had to waddle through the casino for help.

Veterinarians use it. A tortoise that cracked its shell falling from a second-floor window was successfully glued back together. Other superglued animals: racing pigeons have had their feathers glued together for better aerodynamics, fish have had their fins reattached, and horses have had their split hooves mended.

Protestors use it. A man protesting tax laws that left people penniless in Bristol, England, took matters into his own hands. After more than 200 attempts to contact the Inland Revenue helpline, he went down to the local tax office armed with a tube of superglue. When they wouldn't help him, he glued his hand to a desk, vowing to stay attached until he got answers. After finally getting unstuck, he was allowed to voice his views on a local radio station.

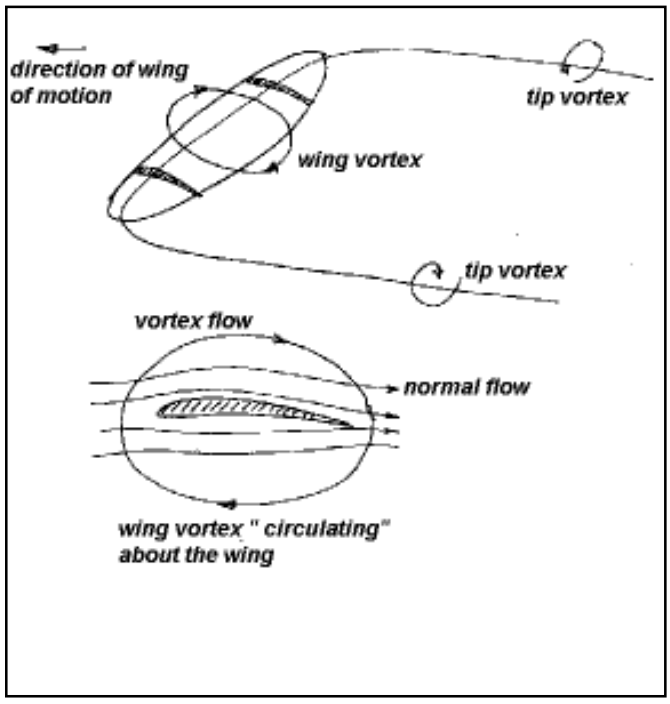
"Lift, an answer to Hal".

From: Sergio Montes <montes@tassie.net.au>
To: SAMTalk <SAMTalk@topica.com> 18/12/03

Dear Hal,

Thanks for the theory on lift that you ask me to consider. It brings forth the question of how can we explain in simple terms the generation of lift by a wing profile. I have thought about this problem many times, always coming to the conclusion that the production of lift is quite hard, almost impossible, to bring to simple terms, because it involves some concepts that are not everyday themes of discussion. The consequences of lift are easier to understand.

Because of this inherent complexity, many incomplete explanations have been presented. A typical one consists of considering two air molecules that separate at the the leading edge of a wing. When they arrive at the same time at the trailing edge the one that traversed the longer distance, which is supposed to be over the upper profile must have a greater velocity than that over the lower profile. A higher velocity means that its kinetic energy is larger at the point of arrival than that of the lower molecule. But as they started with the same energy at the leading edge, this can only mean that the pressure on the upper molecule is smaller, (total energy = kinetic energy plus pressure).



Thus there is a difference in the pressures on top and bottom of the airfoil, this difference in pressure times the area of the wing is the lift. This is what is normally taught in high school but it ain't true, as there is of course no reason why the two molecules should arrive at the trailing edge at the same time.

I mention this as I am sure many of us have tried to frame this mysterious lift generation in some simpler way, precisely so we can discuss it in groups such as this one.

The explanation of lift is the work, independent and almost simultaneous of three persons, two who were engineers, one a mathematician, Lanchester in England, Kutta in Germany and Joukowsky in Russia, all about 1900. This explanation introduces the necessary complication of the existence of vortices about the wing, vortices that are really quite familiar to us in the form of wing-tip vortices, but that we seldom associate with the production of lift. We all have seen the photos of a plane shedding a long vortex trail from its wing tips (it was shown in this list some time ago), but we have to think that these wing tip vortices are not isolated on each tip. They are connected by another vortex strand over the wing, forming what is called a horseshoe vortex. The vortex formed over the wing rotates in such a way that its velocity over the top adds to the normal airflow, the vortex velocity at the bottom of the profile goes against the airflow. See sketch attached. One can imagine this associated vortex flow 'circulating' over the wing. In fact "circulation" is absolutely necessary to the generation of lift. Once we accept this, the argument of conservation of energy tells us that the pressure on top must be less than the pressure at bottom and that lift is generated.

The difficult part in this explanation is to think of a mechanism for the start of the vortex when the wing begins to move, and this has to do with the nature of the flow about the trailing edge. The mechanism was eventually found by Kutta and Joukowsky , and many early experimental confirmations of these ideas were at hand, even before 1910.

This theory has stood the test of time, in fact it has to be one of the most brilliant developments in engineering and science of the past century. What gives me particular pleasure is the fact that Lanchester was just an amateur mathematician, in fact a builder of motor cars by trade, he could have been anyone of us, yet his fertile mind was able to bring forth the importance of a phenomenon that would have appeared totally unrelated to the lift: the existence of the tip vortices.

As for the consequences, they fit what Eut and Hank Baer have said.

The lift force on the wing must be countered exactly by the momentum of the airflow in the opposite direction following Newton's equation applied to the system of air and wing. This is what Eut has stressed. Hank spoke of the importance of negative pressures, and he is quite right, as most of lift derives from that, as the curve in the sail suggests and the condensation pattern of the photo shows.

Sergio

SAM 600 Contest Calendar 2003/2004

(Note: Contests start at 10:00am unless otherwise stated).

~~February 14th/15th 2004~~		**4th Leopold Annual Fly-in**	**Leopold WCS**
~~Saturday 14th~~		1/2A Texaco and Duration	
~~Sunday 15th~~		Texaco and Gordon Burford/ 38 Antique Combo	
(Postponed due to State Fire Danger declaration, to a date to be announced).			
March 6th/7th 2004		**Victorian Old Timer State Champs**	**Haddon***
		* (Please note change back in venue)	BAI
Saturday 6th		1/2A Texaco and Duration	
Sunday 7th		Texaco, 38 Antique and Nostalgia	
March 20th/21st 2004		**2nd Northern Victorian Champs**	**Cohuna**
Saturday 20th		1/2A Texaco and Duration	
Sunday 21st		Texaco and Nostalgia/Gordon Burford Combo	
		** Reminder: Club Texaco Shield (as per last year) held in conjuction with the Texaco Event on Sunday.*	
April 9th-12th 2004		**12th Annual Easter Fly-in Swan Hill**	**Swan Hill**
Friday 9th,	1.00pm	1/2A Texaco	SHMAC
	4.00pm	2cc	
Saturday 10th	9.30am	Texaco	
	1.30pm	Duration	
Sunday 11th	9.30am	38 Antique	
	1.30pm	Gordon Burford	
Monday 12th	9.30am	Nostalgia	
April 17th-21st 2004		**57th MAAA National Champs**	**WA**
Wednesday 21st		Duration & Gordon Burford	
Thursday 22nd		Standard Duration & 1/2A Texaco	
Friday 23rd		Texaco	
May 1st & 2nd 2004		**South Australian State Old Timer Champs**	**Monato SA**
Saturday 1st		Texaco & Duration	
Sunday 2nd		1/2 A Texaco & Gordon Burford	
May 21st thru 24th 2004		**2nd SAM Champs DownUnder**	**Cootamundra** SAM 1788

Contest Calendar Contacts:
Contest Director: Peter Hosking, 03 5248 5461 email: <peterh@webaxs.net>
President: Chris Lawson: 03 5275 8482

Melbourne R/C Aero Club Fly-in, Wesburn, Sunday Jan 11, 2004

Sunday dawned promising after somewhat diffident weather for some weeks. A group of stalwart flyers set out to find the field as per the map in the last issue of "The Thermaleer". After a journey that seemed to take forever, particularly those hardy Geelong and Mt Eliza members, we were greeted with a wonderful site (pun intended). The Melbourne R/C Club at Wesburn had done us, and themselves, proud. The flying area was beautifully prepared with closely mown couch grass just like your front lawn. Green and lush courtesy of the fine lake which also serves as a take off and landing area for float planes.

Changing wind direction close to the ground caused some casualties on landing. Fred Stebbing had problems with this as did Brian Laughton with an OOB in **1/2 A Texaco**. Barry Barton won the event with a superb flight.

The **Gordon Burford Event** saw a keen newcomer, to Old Timer that is, with Cliff McIvor making the fly-off in style. The event was won by Chris Lawson with the fastest climbing duck in the world aka the "Mallard". Fred Stebbing second.

Nostalgia saw an incredible duel between Kevin Fryer and Peter Bennett. Kevin won by 0.17 of a second, you wouldn't believe it ! PCB

1/2 A Texaco

Name	Model	Engine	Total	Fly-off
Barry Barton	Stardust Spl	Cox	1080	783
Kevin Fryer	Atomizer	Cox	1080	711
Peter Bennett	Red Ripper	Cox	1080	532
Don Cameron	Bomber	Cox	1080	380
Chris Lawson	Racer	Cox	1080	181
Greg Lepp	Intercepter	Cox	1054	
Steve Gullock	Bomber	Cox	995	
Fred Stebbing	RC-1	Cox	881	
Brian Laughton	Red Ripper	Cox	315	

Gordon Burford Event

Chris Lawson	Mallard	PB	900	378
Fred Stebbing	Swiss Miss	PB	900	347
Cliff McIvor	Atomizer	PB	900	247
Peter Bennett	Texan	BB	788	
Steve Gullock	Swiss Miss	BB	773	
Brian Laughton	Swiss Miss	PB	701	

Nostalgia

Kevin Fryer	Hyphen	OS40	1080	522.49
Peter Bennett	Hyphen	KB40	1080	522.32
Chris Lawson	'44 Playboy	KB40	926	

"The Thermaleer" is the official newsletter of SAM 600 of Australia. Victorian R/C Old Timers Association (SAM 600) Inc.

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If undelivered please return to ;-) 3 St Vincent Place, Albert Park, 3206, Australia

ROBERT TAYLOR - Paid Entry
Haddon Postal. Gordon Burford Event flown on 7th December 2003

NAME	MOTOR	MODEL	ROUND
Robert Taylor	Ball Bearing	Creep	* 1* * 2 * 3 *4*

3 Max's scored O/R 300 300 300
FLY OFF- 1 HOUR,56.45 = 7005 plus 900 = 7905 Total Score

Witnessed and signed by Ron Morris MAAA No 11157 The Fly Off : the weather was hot 38°, 10 km south wind. The Taipan 2.5 B/B was shut down at 31 sec as the model was almost out of sight. I had an 8x4 wide blade prop running at 15,000 RPM. During the flight the model disappeared from sight five times, full up and full rudder was used to spin the model down so I could regain sight of the little "CREEP". The total flight was 3.15 minutes short of two hours.

I've asked Chris Lawson if this fly off time is a record for the Gordon Burford event. He is checking the S.A.M. 600 records. A very enjoyable day.
Yours, Robert Taylor.

P.S. Hope to see everybody at Cohuna on the 20th and 21st of March for our Northern Victorian Championships and our Inter Club Challenge Team of 3 Event.

Robert Taylor shown here with his outstanding GB model "Creep".