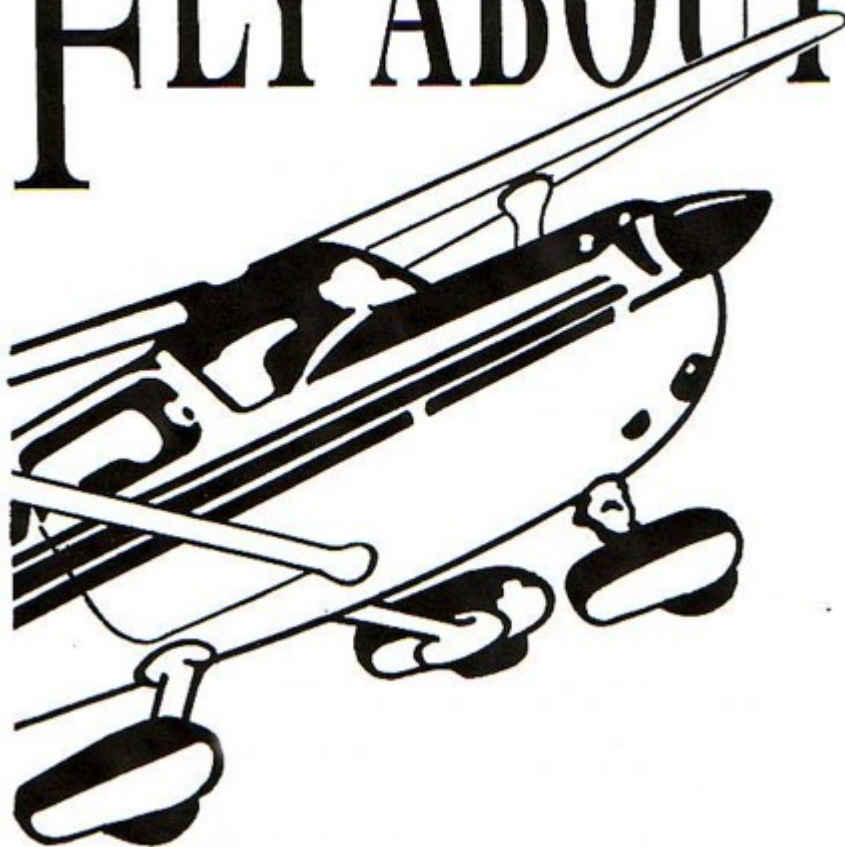


# FLY ABOUT



OFFICIAL ORGAN OF THE NORTHAM AERO CLUB (INC)

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## **PRESIDENTS REPORT**

Hi all.

This being the last President's Report for the 2016/17 year I would like to sincerely thank the Northam Aero Club Committee.

I would like to congratulate all the Award Winners from the NAC Dinner Presentation Night. Congratulations to Peter Hill, the Club Captain for his fourth Club Championship. Peter will be standing down as Club Captain this month so if you would like to put your hand up please contact me, whether you are a pilot or a non-competing pilot. Clubman Award went to Heather, great work. Congratulations to Matt Bignell for receiving that fantastic Life Membership. Well done to all.

Our Club has many people in the background that work tirelessly without the awards and MJ your diligence in putting our monthly mag together is very much appreciated. Thank you Martin.

The Annual Dinner and Presentation Night was very well attended by over 60 people and it was heartening to see Adrian Clements and John Masters having an enjoyable time.

You may have noticed our new Donga that was donated by the National Ballooning Championship Committee for use by the NBC as the Briefing Room during and after the championships. The coat of paint inside and outside has made such a difference. A big thanks to Peter Clements for his time and efforts to supply the power and lights.

Our Annual General Meeting on Friday 21<sup>st</sup> July 2017, please bring a plate to be shared.

It is great to see our Instructors being kept busy with PGL ready for another 50 hours service.

Happy Flying and keep using that Carby Heat.

Cheers, Errol



The “halfdone” Donga

# WANTED

Pictures, Stories, Tales,  
Adventures, Gossip.

In fact anything at all.

If you have a story to tell please send it to me and share it  
with your fellow club members.

I am always on the lookout for items to share.

[martinj1@iinet.net.au](mailto:martinj1@iinet.net.au)

## **Club Captains Report**

Sunday 9 th July was our Monthly Flying Comp.

" AVON DISTRICT AIRSTRIP RECONNAISSANCE TOUR"

To refresh our memory for any alternate landing options.

Ten intrepid Aviators flying 7 different aircraft gathered in the Flight office in good spirits with a nice cuppa and cake from the Lovely Ladies of the Kitchen!

Right away I would once again sincerely thank our ladies for their fantastic cakes and bikkies, tea and coffee etc.

Beth,Marg,Megan,and Makala, THANK YOU.....

We had a good briefing,during which Matt Bignell Airfield Safety Officer and V.P. spread out the Airfield Closure Kit and told us why what when and how to use it should the need arise - timely as we come up to a busy fixed wing and hot air balloon season.

All TEAM NAC pilots had full Comp Sheets 30 days prior as usual, so ample time to read/print off /fly some practice runs.

A bit cool but great flying conditions, Runway 14.

Ten Pilots flying 7 different aircraft-- good.

TEAM NAC Pilots enjoyed a very interesting tour overflying six airstrips -Northam ,Northam Army Base, Wilding Farm Strip, White Gum Farm,Dempster Strip,Darlington International(Claudes) Scores were again closely grouped together.

Pilots who fly NAC Monthly Comps give themselves every opportunity to keep their flying skills current,well honed and proficient, so it is no surprise that all scores are pretty close by all Pilots.. Visitors had great seats and lots of tea and cake!

Results came down to a matter of metres on or off the keys or a missed radio call or landmark to decide the finishing order.

JUDGES: Radio: Matt Bignell.

Runway: Shaun,Megan and Junior Member Makayla.

Thank you,we all value your work greatly.

## RESULTS:

Equal First Place	Cessna 172	VH-PGL	Ashley Smith
	Cessna 152	VH-BFC	Peter Hill
Second	Cessna 172	VH-PGL	Dave McFarlane
Equal Third	Cessna 172	VH-PGL	Trevor Sangston
	PA28-235	VH-CEU	Howie Pietersie
Equal Fourth	Jabiru	4046	Ian Berry
	Cessna 172	VH-PGL	Russell Steicke
Equal Fifth	Zenith	19-7108	Bob Emery
	Mooney	VH-CBA	Milton Brooks
Sixth Place	Cessna 150	VH-WNS	Reuben Bush

Sincere congratulations to all Competitors !

### NEXT NAC FLYING COMP :

SUNDAY 13th AUGUST 2017. 9 a.m. start Northam Airfield.

" WONGAMINE BROOK RECONNAISSANCE"

All Members welcome, refreshments provided, and seats available in Club Aircraft for Members who would like to fly with TEAM NAC.

Hope to see you Sunday 13th August 9 am at Northam Airfield.

Until then,

Thank You and Stay Safe.

Peter Hill

Club Captain 0450415947 [prh@aurora.net.au](mailto:prh@aurora.net.au)

# **Northam Aero Club Annual Awards Dinner**

## **Saturday 24<sup>th</sup> June 2017**

Northam Aero Club celebrated its 49<sup>th</sup> Year as an Incorporated Club and held its Annual Dinner on Saturday night with the highlights including all the Life Members of the Club that could be there.

Adrian Clements,  
Gren Putland  
Claude Meunier  
Robyn Stewart  
Jim Jenkins

Jim Jenkins was an Instructor at Northam Aero Club many years ago and tried to leave several times, always coming back to help out when begged.

Robyn Stewart continues flying successfully and has achieved many records in fixed wing flight .

Gren Putland is one of the main driving forces behind Ballooning in Western Australia and continues his great work in leading the National Ballooning Championships team to be held here from September 2<sup>nd</sup> to September 9<sup>th</sup> 2017.

Claude Meunier has successfully flown around the world twice and is the founder of the Earthrounders, an organisation that keeps track of all those successful pilots to have achieved the “flight around the world” status.

Adrian Clements, a foundation member of the Aero Club, served on the Committee in all roles including setting up and editing the club magazine. Adrian has also sponsored the Clubman Award for Northam Aero Club and it was an honour to have him there Saturday night to make the presentation of this year’s award. I was lucky enough to be the recipient of this year’s Clubman Award, thank you Adrian.

Cr. Steve Pollard and Kathy Pollard, were our honoured guests on the night. Andrew Eldridge, President of Royals Aero Club together with Ian Hurst as President of Pearce Flying Club also attended. 64 people in all, thanks to all that travelled from far and wide.

Club Champion – Peter Hill 1<sup>st</sup> place; Ashley Smith 2<sup>nd</sup> place; Howard Pieterse 3<sup>rd</sup> place in the overall position for the year.

Life Memberships were bestowed on Errol Croft, our President for the past four years; and Matt Bignell our Vice President also serving in the role for the past four years. Both men have made huge contributions of their personal time to spend keeping the Aero Club safe and fully maintained since they both joined back in the 1990’s. Congratulations.

Ashley Smith received his Certificate achieved for his first night solo flight.



Clubman of the year award, presented by Adrian Clements to Heather Deegan

Club championship awards L-R Peter Hill 1st place & Club Champion, Dave Mcfarlane 4th, Ashley Smith 2nd, Howie Pietersie 3rd & Ian Berry 5th



Members & guest enjoying a meal catered by Federals footy club

Life Members ; L-R Gren Putland, Errol Croft new life member, Jim Jenkins, Robin Stewart, Claude Meunier, Adrian Clements, Matt Bignell new life member.







Les Ballantyne , a long standing NAC member and Past President presents the trophies he sponsors to the TEAM NAC Pilots



## Northam Aero Club \$1,000 Aviation Scholarship

The aviation training scholarship offered by Northam Aero Club is designed to encourage students who have an interest in obtaining a Private Pilot Licence or entering the aviation industry by providing assistance for students to reach the Recreation Pilot Licence level at Northam Airfield.

The aims of the scholarship program are to:

- Introduce people to the sport of recreational aviation;
- Develop responsible and safe flying attitudes;
- Offer a basis of aviation knowledge for advancement and careers in recreational, military or general commercial aviation;
- Assist people to complete their flying training at minimal cost; and
- Encourage people to become active long-term members of the recreational aviation community.

The scholarship is for flight training provided by Northam Aero Club to the value of \$1,000. The scholarship is offered on a dollar for dollar basis, for every dollar of training spent by the student, the Northam Aero Club will match the amount up to \$1,000. Students would be responsible for purchasing their own books and study material as well the costs of aviation medical.

To be eligible to apply for the scholarship, applicants need to be at least sixteen years old. Applicants will need to complete a form explaining why they would like to receive the scholarship and undertake a thirty minute trial introductory flight at their own cost. Students under the age of 18 will need to have a parent or guardian sign the application form. The successful candidate will also be required to become a financial member of the Northam Aero Club.

The winner of the scholarship will be decided by a panel appointed by the Northam Aero Club Committee that will assess the application and review the feedback from the Flight Instructor who conducted the trial introductory flight. Applicants with some previous flying experience may apply. The winning students will be required to use the flight training within twelve months of accepting the scholarship.

All enquiries should be directed to the President of the Northam Aero Club at PO Box 247 Northam WA 6460 or email to [secretary@northamaeroclub.com](mailto:secretary@northamaeroclub.com)

**Closing Off Date for Applications is 11<sup>th</sup> August 2017.**

# Application for Northam Aero Club Aviation Scholarship

Surname .....

First names .....

Address .....

Telephone Home ..... Mobile .....

Email .....

Date of Birth ..... Gender .....

School or Institution attended .....

School contact .....

Have you undertaken any previous flight training?    Yes        No

If Yes, where was this undertaken and with which organisation?

.....

How many flying hours have you logged? .....

Please attach a handwritten statement of two hundred words explaining why you would like to win this scholarship and how you would benefit.

I understand that by applying for this scholarship I will accept the decision of the panel of judges and that I will have twelve months to use the training. I understand that I will be responsible for undertaking an aviation medical at my own cost and that I will be responsible for purchasing my own text books and study material.

.....

Signed

Date

Parent or guardian

**Closing Off Date for Applications is 11<sup>th</sup> August 2017**

# UPDATE

01 April 2017



## ONLY 5 WEEKS TO GO

The National Ballooning Championships 2017 will take place between 2 and 9 September 2017 in Northam. The event is just around the corner and the Planning Committee is busy making preparations for the event.

### Business and Activity Opportunity

There will be an increased number of people in Northam during this event. This will provide the perfect opportunity to run an activity or to open your business as people will be looking for things to do, places to eat and things to see during their visit to Northam.

Contact the Shire of Northam's Community Development Officer, Michelle Blackhurst by email [cdo@northam.wa.gov.au](mailto:cdo@northam.wa.gov.au) or telephone 9622 6100 so that we can assist you to market your activity to the community.

### Pilot Registrations

Registrations for Balloon Pilots to attend are now open and the Committee has started to receive registrations from Pilots who will be attending.

### Volunteers

Would you like to be amongst all the action and join us for a week of fun and do something you'll never forget? The Committee is searching for volunteers for the following tasks:

- Drivers with a 4WD who are able to tow a trailer with the balloon and basket and drive the pilot and crew to the launch field and retrieve the balloon once it has landed.
- Balloon Crew. You would be helping set up

the balloon for launch and packing the balloon away once landed. This is a very physical task so you would be required to do some heavy lifting.

Training will be provided for all tasks.

This is a great opportunity to get up close and personal where the action is and spend the week chasing balloons. Please only apply if you are available from 5am-9am and then 3pm-6pm, from the 2/9/2017 - 9/9/2017.

### Merchandise

Limited edition Ballooning badges are now available for \$5 (plus postage if required). These can be purchased from the Northam Visitor Centre or you can place an order for a badge via email [bbacclements@bigpond.com](mailto:bbacclements@bigpond.com).

### Sponsorship Opportunity

The Planning Committee are offering a limited number of sponsorship opportunities. If you are interested in finding out more, please contact us via email [northamballooning@gmail.com](mailto:northamballooning@gmail.com).



# FRIED VALVES

Reprinted from the AV Web, website

<https://www.avweb.com/news/pelican/182155-1.html>

A cylinder in your piston aircraft engine flunks its compression check, with lots of leakage past the exhaust valve. The mechanic says you probably fried the valve by leaning too aggressively. Wrong, says AVweb's John Deakin! Lean mixtures don't cause burned valves — lousy valve-to-seat geometry does. It's probably the fault of the factory or overhaul shop, not the pilot.

The term "Fried Valves" seems to be sneaking into the lexicon of engine terminology, and is most often used by those who speak in dire tones about LOP (Lean of Peak) operations. Next they'll blame LOP for tail flutter, vacuum pump failures, faded upholstery, and other such things. While were at it, let's blame LOP for the ozone holes, global warming, and the next ice age, too. It makes about as much sense.

I'd like to convince you that EGT, ROP, LOP, octane, and all the other "usual suspects" have little or nothing to do with valve temperature, valve recession, valve failure, or valve anything. To find out what DOES affect valves, read on.

A Little History, If I May?

There has been a rash of messages lately about LOP, and whether it will cure problems, prevent them, or cause them.

For example:

*"... IMHO, the jury is still out as far as LOP being the solution to the top end problems with these engines. LOP certainly saves fuel and may result in lower operating costs..."*

Who the heck ever said LOP would cure problems built in by the factory?

Let's review some recent history.

During the past 15 years or so, quite a number of people (including me) have come to the following conclusions:

1. Engines built by TCM prior to about 1991 usually ran to (and beyond) full TBO without much work on the cylinders.
2. Engines (and cylinders) built during or after the 1991 strike at TCM have consistently suffered from seriously excessive premature cylinder problems, with very few making more than about 500 hours.

In 1998 or so, TCM even quietly acknowledged that there was a problem, and they were investigating. They later stated there were no problems, but at the same time, announced some changes in the way they were making cylinders. There is some evidence those changes may have helped with cylinder barrel wear, but the problems with exhaust valves and guides continue to plague owners.

The important thing here is that these issues have NOTHING to do with lean of peak operations! The whole subject of LOP operations never came up until about 1998, when it was discovered that truly balancing the fuel/air ratios across all cylinders would, for the first time, permit most of the fuel-injected engines used across the general aviation fleet to even get there, and continue to run smoothly!

In other words, these engines were suffering from grossly premature top-end (cylinder) problems long before 1998 ... LONG before GAMInjectors were even a dream!

If you remember back before the Internet, when the only way you could read Trade-A-Plane was three times a month on yellow paper, you should remember the hundreds of advertisements for airplanes with "1200 hours since new, 600 hours STOHP" and the like. That meant there were a LOT of engines that were getting premature top-end work long before TBO. That was unacceptable then, and it's worse now. Some sharp observers noted that cylinders built after about 1991 almost never went beyond about 600 or 800 hours without requiring that famous "top overhaul."

I am aware of one brand-new 1993 Bonanza that had to have new cylinders at 200 hours, and had the engine replaced at 500. That particular owner had flown his previous V-35 Bonanza to TBO without problems. Anecdotal? Sure. Typical, too!

I've been a regular on CompuServe's AVSIG (the oldest forum on CompuServe) for more than 20 years, and this subject has been debated and discussed there endlessly all that time. (AVSIG is still going strong, by the way, and remains the finest aviation resource I know.) When the Internet came along, this same discussion became universal on all forums and mail-lists where GA people are found.

I repeat, all this was happening long before GAMInjectors were a gleam in George Braly's eye, and long before LOP operations were seriously considered as a routine method of operation on any of these "flat" engines. (The Piper Malibu is a special case.)



It is beginning to occur to me that many have misinterpreted the purpose of LOP operations, and may have the perception that we believe LOP to be a cure-all for the factory errors. That's just not true!

I'm not sure, but perhaps those of us who were "early adopters" of LOP operations may have been a bit too strident in "selling" LOP. Some now seem to think we suggest nothing but LOP, and that ROP is always "bad." That's also not true!

At first, we probably figured that everyone knew all about ROP, and all we had to do was "fill out the other half of the story." But we're now finding out that a lot of pilots merely want to set one fixed power setting, and don't want to understand what it's doing to their engine, ROP or LOP. The truth is that BOTH LOP and ROP have their proper place. The two different methods are each useful tools in any pilot's bag of tricks to maximize the utility of his aircraft across a broad spectrum of operations. I have resolved to emphasize both types of operation in the future.

Even the factories have modified their stance! Lycoming tech reps used to scream (literally), "I wouldn't recommend lean of peak to my worst enemy!" Now, they are saying, "Well, yeah, it works, but pilots are too stupid to do it." Well, I guess that's an improvement.

There is also the crowd that isn't going to run LOP no matter what, and for them, we need to teach them how to run ROP a little better (usually a lot richer). Or maybe we can't teach them anything, and that's fine, too.

Okay, Now — Back to Those Valves ...

Here's what an aircraft engine valve looks like:

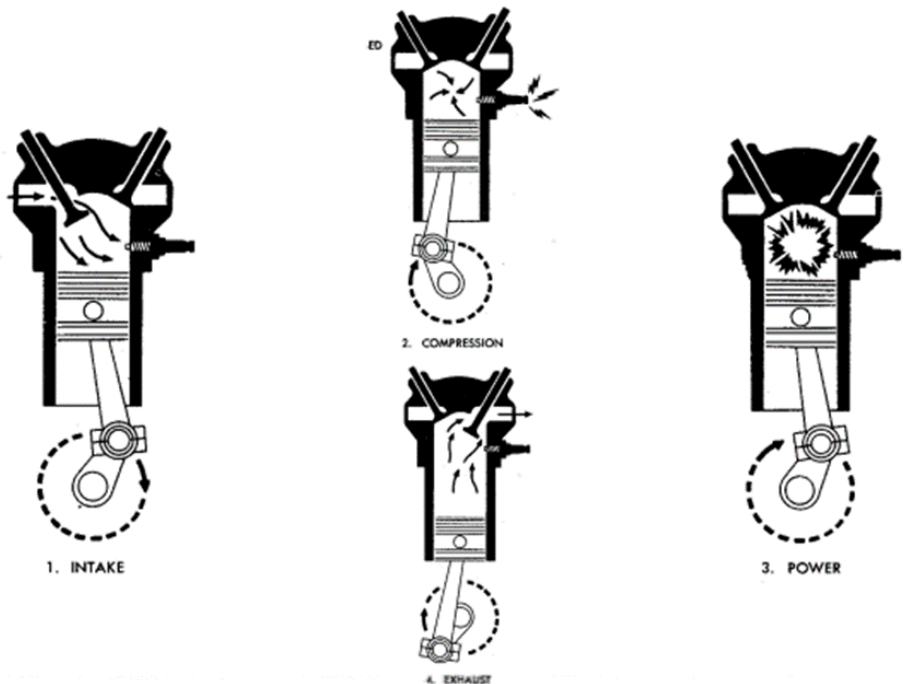


New Valve from Wright R-2600 engine, on display and for sale in the museum at the Southern California Wing of the Commemorative Air Force, Camarillo, California

It is a finely machined part, and looks like a jewel when finished. Tolerances are very tight. The valve stem must be just the right size (when hot!) to just slide smoothly in the "valve guide," itself another finely machined part. Some are of solid high-temperature steel alloy (most TCM engines), others are hollow with liquid sodium inside (most Lycomings) to spread valve heat away from the head and to the valve stem.

(An old field test on sodium-filled valves was to drain a sample of the engine oil, and check it on the spot for the presence of sodium. If found, it would indicate valve damage. I haven't thought of that in decades!)

There are many variations, but the valves in most aircraft engines are pretty much the same, differing only in minor details. There is usually one intake valve that opens every other turn of the crankshaft to let the good stuff in, and one exhaust valve that opens every other turn to let the bad stuff out. This is the classic four-stroke "Otto Cycle."



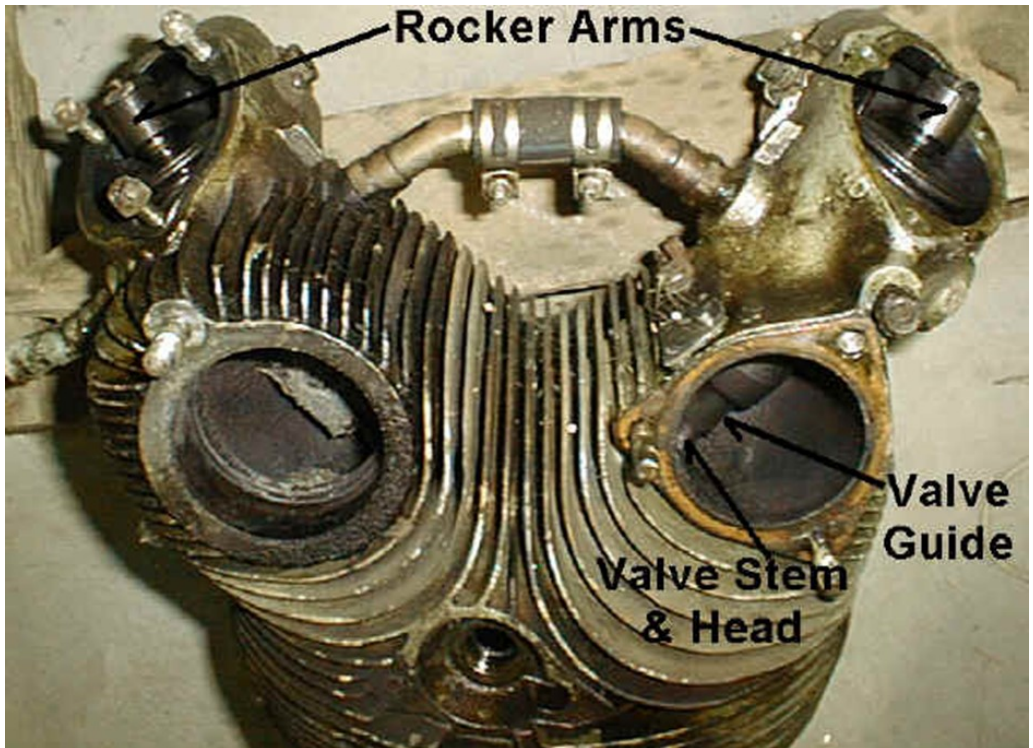
Four-stroke "Otto Cycle"



Picture an upright cylinder, just after the exhaust stroke:

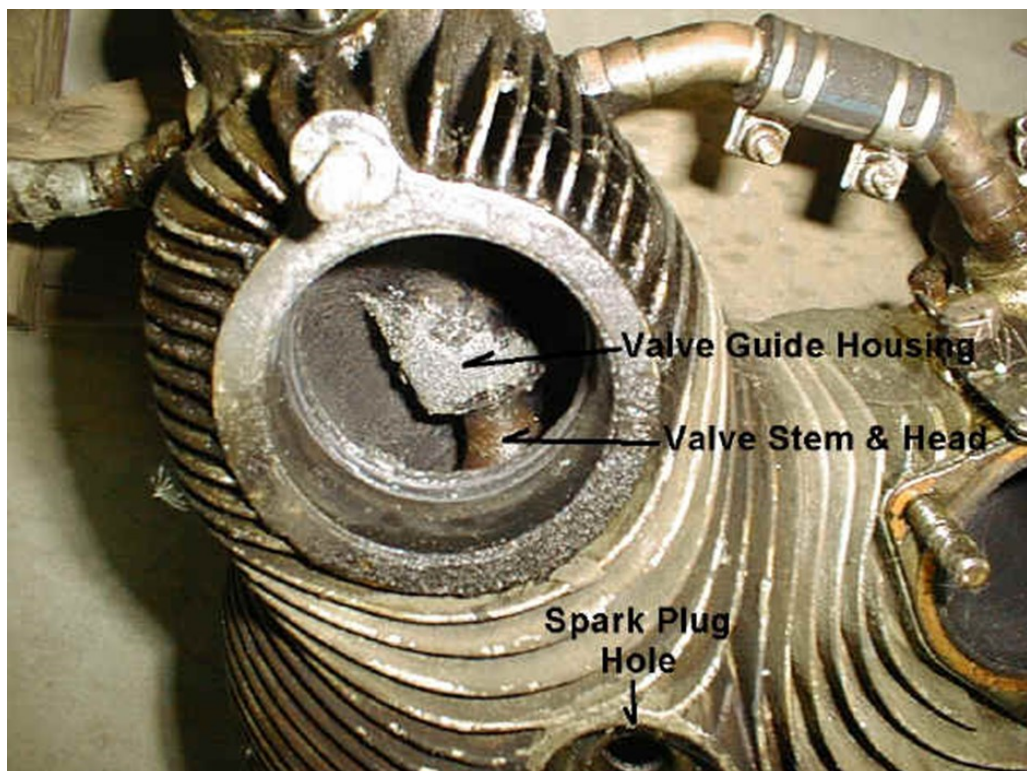
1. Intake valve opens just before TDC (Top Dead Center), exhaust valve closes shortly after TDC (yes, both are open for a brief time, and this is called "valve overlap"), piston falls away, sucking in the fuel and air (good stuff);
2. Intake valve closes, piston comes up, compressing the mixture, spark fires before TDC, combustion starts, reaches peak pressure after TDC;
3. Combustion event (both valves closed) drives piston down, turning crankshaft (can you spell "Rube Goldberg"?);

Exhaust valve opens, piston comes up, pushing the "bad stuff" out. The cycle repeats, 20 times per second or more at high RPM (more than 40 crankshaft turns per second), endlessly. Well, maybe not endlessly, but it must seem that way to the poor valve, with somewhere between one hundred and two hundred million cycles to TBO!



An old, worn cylinder from a Pratt & Whitney R-1340 engine (600 hp) from a North American AT-6.

Not very different in function from my much newer TCM IO-550.



Above: A peek into the exhaust port (exhaust pipe removed).  
The deposits, are no doubt, "lead oxybromide deposits."  
(That's a joke, folks!)



Left: Rocker arm and pin from Pratt & Whitney R-2800, and two damaged plugs from a blown cylinder.

This story will be continued next month or go to the AV Web, website  
<https://www.avweb.com/news/pelican/182155-1.html>



## BAR ROSTER 2016—2017

<b>FEBRUARY</b>		
4th-5th	-	Crofty
11th-12th	-	Dave
18th-19th	-	Peter
25th-26th	-	Howie

<b>MAY</b>		
6th-7th	-	Crofty
13th-14th	-	Dave
20th-21st	-	Peter
27th-28th	-	Howie

<b>MARCH</b>		
4th-5th	-	Matt
11th-12th	-	Dave
18th-19th	-	Mike
25th-26th	-	Crofty

<b>JUNE</b>		
3rd-4th	-	Matt
10th-11th	-	Dave
17th-18th	-	Mike
24th-25th	-	Crofty

<b>APRIL</b>		
1st-2nd	-	Peter
8th-9th	-	Dave
15th-16th	-	Howie
22nd-23rd	-	Matt
29th-30th		Mike

<b>JULY</b>		
1st-2nd	-	Peter
8th-9th	-	Dave
15th-16th	-	Howie
22nd-23rd	-	Matt
29th-30th		Mick

## Bar Hours

IF UNABLE TO DO YOUR ROSTERED DAYS PLEASE  
MAKE ARRANGEMENTS TO SWAP WITH SOMEONE

**THE NORTHAM AERO CLUB (Inc.)**  
**PO Box 247 NORTHAM**

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**NEXT CLUB COMPETITION**

**9am Sunday 6th August 2017**

The Northam Aero Club Committee  
meeting will be held at the club rooms on  
Sunday 6th August 2017 at 1:00pm

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