



**ROYAL
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SOCIETY**
AUSTRALIAN DIVISION
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<https://www.facebook.com/groups/RAeSSydney/>

NEWSLETTER



John Ehret
Manager
Ground Safety & Environment
Qantas Group Shared Services
Workplace Health & Safety

discussing

**'Aircraft Cabin Fume
Detection & Assessment –
Isolating Emission Sources'**

Date: **Wednesday 31st May, 2017**

Time: **18:00 for 18:30 hours**

Venue: **Mech Eng Theatre, Mech Eng Building, University of Sydney**

Light refreshments will be available prior to the commencement of the meeting Attendance will attract 1.5 CPD hour

Profile: John was born in Sydney and has a Masters in Applied Science (OHS) from the UNSW. He is married with 3 grown children and a passion for Vincent motorcycles.

John commenced his career in 1979 working as a Laboratory Technician for the Unilever Group of companies working mainly with emulsion polymers and thermoplastic adhesives. Over the years he moved into the roles of Production Chemist and Technical Services Chemist. He was then offered an opportunity in the area of Workplace Health and Safety. Johns' final position in the chemical industry was the role of Health Safety & Regulatory Affairs Manager with National Starch and Chemical Pty Ltd, part of the ICI Plc Group of companies.

John then opened his own small consultancy, Safety and Environmental Consulting services between 2000 and late 2001 focussed on services to the environmental remediation of contaminated sites.

In late 2001 he was successful in gaining the role of OHS Manager for Qantas Freight. In 2005 he worked with Cabin Services for approximately 9 months before moving to Qantas Engineering as Manager Ground Safety & Environment where he spent the next 10 years. During this time John noted that there were often extensive periods of Ground Time associated with fumes and odours which could be described as mild, transient and often troublesome to isolate using traditional methods. Given his background in Industrial Hygiene, he looked to apply his knowledge of air quality to the task of isolating fume defects in aircraft which utilise bleed air by analysing the changes in the air quality as the configuration of the Environmental Control System (ECS) was altered.

Synopsis: John will focus on the journey to develop the method, the results obtained and the opportunities this type of analysis presents with respect to isolating the defect, minimising Ground Time, protecting Ground Engineers and providing an increased level of assurance during the Return To Service of aircraft.



Flight Crew Members Say Toxic Air in Plane Cabin Harmed Their Health. To view video: <http://abcnews.go.com/US/flight-crew-members-toxic-air-plane-cabin-harmed/story?id=43231109>

RSVP: Whilst attendance is free - registration for the evening **is required**. Please register by clicking on/copying and pasting into your URL this link: <https://raesmay172.eventbrite.com.au> Your registration will be confirmed by email with an attached ticket. **Please print the ticket and present the ticket at the door. Please note:** Non members should enter the code **NM** if requested to enter a RAeS membership number. Any member who does not have access to the internet can send a letter to Mr Jeff Lock, 4 Hillcrest Place, North Manly NSW 2100 with your name (plus names of accompanying persons), membership number or state 'Friend' if you are a Friend of the Branch, and phone number.

Light supper: *Following John's presentation a light supper (pizzas) will be provided to give the speaker and attendees the opportunity to network, mingle, and to continue discussions.*

Parking: is available in the Shepherd Street multi-story car park, located on the corner of Cleveland St and Shepherd St. The rate is \$2 per hour (up to \$6 maximum), but note that only gold coins are accepted in some machines. Parking is also available in University of Sydney On-Campus Parking for \$2 per hour (up to \$6 maximum). Additionally, free parking is available in surrounding streets. Please observe parking restrictions and allow time to drive to the University of Sydney, park, and walk to the venue.

Public Transport: The closest train station is Redfern station, which is a 10 minute walk away from the venue. From Railway Square near central station any 42X bus (e.g. 422, 426...) and the M30 will take you to the University of Sydney (on City Road). Please allow time to travel by public transport, including waiting time, and time to walk to the venue.

Wings over Illawarra – 5-7th May, 2107: The Sydney and Canberra Branches of the Society in conjunction with the AIAA Sydney Student Branches, combined to jointly display at Wings over Illawarra 2017. The display was located in the AVIATEX 2017 trade component pavilion which proved to be a great location which saw plenty of foot traffic which allowed them to be introduced to *Cool Aeronautics* run by our Canberra Branch representatives Assoc Prof Andrew Neely (who is also our new Australian Division President) and SQNLDR Evan Smith. *Cool Aeronautics* is designed to introduce to everyone and in particular to children, the importance of STEM (Science, Technology, Engineering, and Mathematics). Highlights of the flying display including the 'Wall of Fire' can be viewed: <https://www.youtube.com/watch?v=2btWP9LW59s>

AUVSI XPONENTIAL 2017 - DALLAS: To May 8-11: The Association for Unmanned Vehicle Systems International held XPONENTIAL 2017 in Dallas, Texas, USA, May 8-11. AUVSI XPONENTIAL 2017 is the largest trade show for the unmanned systems and robotics industry. More than 7,000 industry leaders and professionals from more than 55 countries attended the show. The 2017 exhibit hall showcased more than 600 cutting-edge companies from around the world, representing more than 20 industries. In addition, there were more some 100 educational sessions, providing information about the future of unmanned systems policy, regulations and technology. The Association for Unmanned Vehicle Systems International (AUVSI)—the world's largest non-profit organization dedicated to the advancement of unmanned systems and robotics—represents more than 7,500 members from more than 60 countries involved in the fields of government, industry and academia. AUVSI members work in the defence, civil and commercial markets. There will be a more detailed report next month.



Boeing Aircraft First Flight: To watch the first flight of the 787-10 which took place Friday 31st March, 2017 click **Watch here!** and also - Boeing Completes Successful **First Flight of 737 MAX 9** – for further information visit: <http://boeing.mediaroom.com/index.php?s=20295&item=129882>

Membership Information: Annual memberships commence at only \$145 or \$28 for Students (but free for the first year). Being a member helps us sustain a vibrant activities programme and opens the way to access restricted 'member-only' events.

Closed Member Only Group on Facebook: Sydney branch is trialling a live video streaming service of monthly branch lectures. Watch lectures live or at a later time, at the “Royal Aeronautical Society - Sydney Branch - Members Only” group within Facebook. Please note that this service is only available to financial members of the Royal Aeronautical Society.

Closing date for Centennial Scholarship Applications 31st May, 2017: In 2003, the Royal Aeronautical Society launched the Centennial Scholarship Fund in celebration of one hundred years of flight and to look forward to the next generation of aerospace pioneers and experts in the 21st Century. There are two Centennial Scholarship categories: individual and team. For further details refer: <https://www.aerosociety.com/news/closing-date-for-centennial-scholarship-applications-is-31st-may/>

From our Friends at the Aviation Historical Society of Australia: Air Britain Drover Book: "De Havilland Drover, Australia's Outback Workhorse". Would you like a copy of the wonderful book by Geoff Goodall? His book covers the history, development and operational use of the Drover. Also included are 2 pages of specially produced scale drawings, and a page of profile artworks by Juanita Franzi, who has arranged with Air-Britain to bring in a bulk order of Drover books - if there is enough interest. This will save on the postage for each book and the hassle of dealing in Pounds. By doing it this way, the cost of the book would be about \$48.00 + local P&P (approx \$12.00) If you are interested please email: juanita@aeroillustrations.com When Juanita has enough numbers she will confirm the final cost. Refer: Aeroillustrations.com Facebook: [Juanita Franzi Aero Illustrations](https://www.facebook.com/JuanitaFranziAeroIllustrations) Mobile: +61 (0)410 341 343 Phone: +61 (0)2 8084 0199

MY AFFAIR WITH "CONNIE" – by Captain Reg Darwell. (Part 1) - Refer the Vintage Car Club magazine No 390 dated May 2017 - <https://www.shannons.com.au/club/carclubs/vintage-car-club-of-queensland-vccq/>

I was a teenager hanging out on the North Shore with other testosterone muddled kids doing what teenagers do in the late 1950s. Cars were the weapon of choice in those days, old ones in particular eg. Morris Cowleys, Ford V8Mercurys and Vauxhall30/98s. An MG A was the thing to have whilst those of more limited means could buy a new Mini Minor to impress the ladies. I, fortunately as it turned out, had done a "Faust" and sold my soul to the devil known as Aviation. All the money I could rake together as an office boy with Qantas and working shovelling dangerous chemicals in a chemical factory went on flying lessons, so my transport was an old and pretty battered Renault 750. But it was pink! In the Qantas office and mail room I was required to run messages for the Qantas founder, Sir Hudson Fysh. He knew damned well what us "Junior executive trainees" were up to and it wasn't preparing for a life in Head Office! Occasionally, he would invite us in to his office to ask how our flying was going and to reminisce on his early flying days. I managed to get accepted in to an Airline Pilot Training Scheme which was a two year course graduating with a Commercial Pilot Licence, Instrument rating and the theory exams for a Flight Navigator Licence. The cost was two thousand pounds that I had to repay over

a four year period. Hopefully, if I was employed I would be able to meet these payments. I don't want to think about what would have happened if I bombed out. My first trip as a trainee navigator was Sydney - Manila on a Super Constellation in 1961. That's when the "affair" began. In those days navigation was done mostly by the stars using a periscopic sextant that poked up through a hole in the roof and lots of mathematical calculations. It was very exciting stuff for this young "space cadet" as the old wartime hands called me. Sometimes they would even let me have a fly! The engines in the Constellation were very unreliable compared with today's jets. It was not without cause that the



Connie was described as the best three engined aircraft that Lockheed ever produced. In my 1000 hours on Connies I experienced seven engine failures, two resulting in in-flight fires. In the subsequent 23,000 hours on jets – only three failures! I told you it was exciting! One of my mates, who was on his first trip, was on the Connie that crashed after failing to stop after an engine failure prior to the commit speed on take-off at Mauritius. Due to the excellent training of the crew and the leadership of Chief Steward Pat McGann during the evacuation, the only injury was a sprained ankle to the Flight Hostess. The aircraft was destroyed by fire. Oil consumption on these big 52 litre engines was a factor that at about 40 litres per hour (total) could sometimes limit the range of the Connie. As with most man-made vehicles, there is never enough power even with 145 octane fuel that was available then. Qantas pushed them pretty hard to give a cruise speed of 240-250 knots. The superchargers were a two speed affair. At about 15,000 ft. on the climb two symmetrical engines would be throttled back and the gear drive changed to "high blower" to compensate for the lower density air. Metallurgy was pushed to the limit of the times as the turbine would spin at about 23.000 rpm and sometimes fly apart. The engines would then be pushed up to climb power and the procedure repeated for the other two engines up to a

ceiling of about 25,000 ft. This was a fascinating business performed by the two Flight Engineers. It really was a Flight Engineer's aircraft. The pilots called for the power settings and the engineers gave them what they could, a bit like a ship. (To be continued)

2017 Diary: **June 28:** ATSB to present 'The Science Behind the Search for MH370'.

July 19-21: 2017 Aircraft Airworthiness and Sustainment (Australia) Conference, a non-profit event for the benefit of all those involved in sustaining our fleets, both **Civil and Military**, safely and economically through their lifecycle. The Conference will be held at the Brisbane Convention and Exhibition Centre. Call for papers announced with abstracts containing no more than 300 words to be received for review by 14 April 2017. **Delegate and Exhibitor Registration is open now.** Refer details: <http://www.ageingaircraft.com.au/aasc>

July 26: Aviation Safety Forum.

Aug 14-29: 'Total Solar Eclipse Tour' Including visits to famous USA Astronomical and Aerospace Facilities. For further details please contact The Sutherland Astronomical Society Inc. Email: info@sasi.net.au

Sept 25-29, 2017: The 68th International Astronautical Congress – **Unlocking imagination, fostering innovation and strengthening security**-- is being held in Adelaide. Thousands of scientists, including some 200 astronauts, will participate in the international space congress. The global economy and security of many nations depends on assured and secure access to satellites that provide communications, timing and navigation services and remote sensing data. Refer details at: iac2017.org/

Oct 18: **59th Sir Charles Kingsford Smith Memorial Lecture to be delivered by Jayne Hrdlicka, Chief Executive Officer, Jetstar. Venue Powerhouse Museum, Ultimo. Further details to be advised.**

Nov 14-16: 5th International Conference on Aerospace Science & Engineering (ICASE). Refer details: www.ist.edu.pk/icase

Aerospace Websites: www.57rescuecanada.com : Follow Capt. Karl Kjarsgaard's adventures to recover Halifax bomber LW170 which is resting beneath 5000ft of water off the Irish coast;

www.adastron.com/707/updates/updates.htm : Diary of Boeing 707-138B XBA formally Qantas EBA.

www.airshow.com.au www.atsb.gov.au www.aviationmuseum.com.au - Temora Aviation Museum;

<http://boxkite2014.org/book/book.htm> : The Boxkite project.

https://en.wikipedia.org/wiki/Rolls-Royce_Trent

<http://hars.org.au/> Historical Aircraft Restoration Society

<https://herox.com/SpacePoop> The Space Poop Challenge www.powerhousemuseum.com/whatson ;

<https://qfom.com.au/> Qantas Founders Museum, Longreach, Queensland www.singapore.com.sg

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