Out in the shed with Ted.

Ted McEvoy

A Sukhoi 30 showing off.....

"See the Russian fighter plane doing a delicate solo dance at ground level. It is even more amazing when one realizes this is a deadly plane capable of supersonic speeds and dropping nuclear bombs and shooting down almost any fighter plane". ???????

I don't know how many times I've received the above email which shows this "remarkable" Russian aircraft performing seemingly impossible manoeuvres in front of half a dozen blokes who seem just as excited as though they were watching a game of marbles (Click the pic to see the video)

And everyone who sends me the email suggests it's the real deal!! Am I the only sceptic left in the world?? Before you send it on, just have a look at the video:

- Why is there no jet thrust disturbing the ground under the aircraft??
- Why would those blokes in blue be allowed so close to it?? (Would one of them be the pilot of the aircraft perhaps?)
- And hello, what is that model aircraft doing on the ground in one of the scenes??

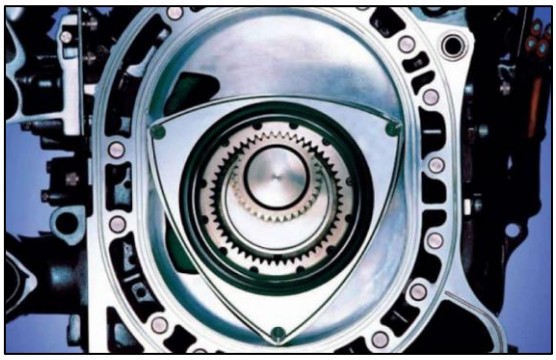
Please don't send it to me anymore. It's just a model people, but you have to admit, whoever is doing the "flying" is actually very talented.

If people can't control their own emotions,
then they have to start trying to control other people's behaviour.

THE RAM
THE MAGAZINE BY & FOR SERVING & EX-RAAF PEOPLE & OTHERS
Vol 55

Rotary “Wankel” engines

Some years ago, Mazda picked up the rotary engine developed by German Engineer, Felix Wankel, and after making a number of modifications, introduced it into their cars in 1965. Over the years Mazda made many modifications and improvements to the engine, but on Friday, 22 June 2012, the Wankel rotary engine's last remaining and steadfast devotee, Mazda, produced their final rotary engine in their Hiroshima plant.



The Wankel engine never really fulfilled its promises and hopes, though over its history over 25 major car, motorcycle, tractor, and aircraft companies, ranging from Suzuki to Rolls-Royce, were actively researching, developing, and/or building the piston-less engine.

The Wankel motor is one of those things that, for all its issues, was just too pure and beautiful for engineers to ignore. With far fewer parts than a regular reciprocating piston engine and a visually elegant design, it's no wonder Mazda kept with it. For a given displacement, it produces far more power than a given piston engine, at a much smaller size and weight. It can rev faster and is inherently smooth, since the motive force is rotational from start to finish, not the back-and-forth hopping of a piston engine. The down side is that Wankels are always a bit more fuel-gluttonous than a piston engine and almost always have dirtier exhaust. Poor fuel economy and more polluting are pretty much the only strikes you need against you in our modern age, so the mainstream Wankel is going away.

Felix Wankel was a gifted and largely self-taught engineer. The fundamental concept behind the rotary engine came to him quite early, as he is reported to have told friends at the age of 17 he would build a new kind of car with "a new type of engine, half turbine, half reciprocating”. His past was checkered with periods in Hitler Youth and the Nazi party, though he was forced out in 1932. After his first patent in 1929 for the engine, it wasn't until after WWII that development started in earnest, thanks to a development deal with NSU in 1951. In 1957, an NSU engineer built the first working Wankel motor without Wankel knowing, which caused him to comment "you have turned my race horse into a plow mare." Like a typical gearhead, I'm sure Wankel was imaging a powerful racing motor instead of the practical lump made by NSU.

The NSU Spider was the first production Wankel-engined car, in 1964. A pretty little rear-engined roadster, it was sort of like the VW Type III convertible that was never made, with its under-trunk-floor engine position and two luggage compartments. Later NSU created the legendary Ro80, a beautiful rotary-engined sedan that looked 20+ years ahead of its time. Sadly, the Wankel proved to be the achilles heel

of the car, with issues with rotor-tip sealing causing some engines to fail as early as 30,000 miles.

Attempts from the Wankel's homeland were nothing compared with the engine's longest and greatest patron, Mazda. Starting with the lovely Cosmo back in 1967 (which had the first two-rotor Wankel) and ending in 2012 with the advanced Renesis engine in the RX-8, Mazda has built cars (and trucks) with rotary engines for 45 years, and in that time managed to work out most of the major sealing and other issues.

The final version of Mazda's rotary, the Renesis, developed 238 HP out of 1.3 litres, very impressive. Less impressive is its fuel consumption and emissions, the latter being the final, shiny coffin nail, as the engine failed to pass the Euro 5 emissions tests. Mazda did release a limited run of a hydrogen-based rotary engine, but future development seems unlikely.

It's not totally gone, though. The engine's just too elegant and simple to disappear entirely, and is finding strange and novel niches in which to survive. Like seat belts. The seat belt emergency pretensioner system in some Mercedes-Benz and Volkswagen is actually a tiny Wankel motor driven by an explosive charge. Wankels may also stick around in certain niche markets, like snowmobiles, since when they fail it's more gradual, and some power may still be generated, for a time. This is unlike piston engines, who may throw a rod and be done with it in a horrific moment of smoke and oil. For snowmobiles, this is a big deal, since breaking down can mean much more than an annoying afternoon. Much more as in lost noses and fingers to frostbite or determined wolves. UAVs are also experimenting with small Wankels, since their simplicity and durability are big advantages for robot aircraft.

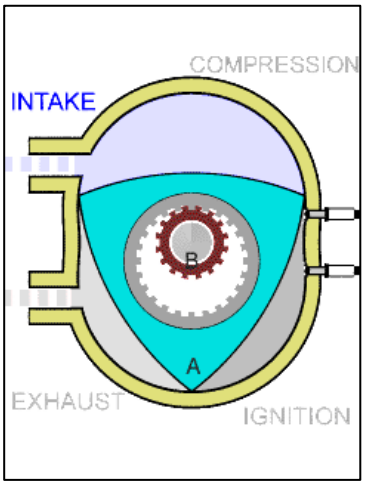
So, why did it fail?

Rotor sealing. This is still a problem as the engine housing has vastly different temperatures in each separate chamber section. The different expansion coefficients of the materials give a far from perfect sealing. In comparison a piston engine has all four functions of a cycle in the same chamber giving a more stable temperature for piston rings to act against.

Apex seal lifting. Centrifugal force pushes the apex seal onto the housing surface forming a firm seal. Gaps can develop between the apex seal and trochoid housing in light-load operation when imbalances in centrifugal force and gas pressure occur. In low engine-rpm ranges, or under low-load conditions, gas pressure in the combustion chamber can cause the seal to lift off the surface, resulting in combustion gas leaking into the next chamber. Mazda has identified this problem and has developed a solution. By changing the shape of the troichoid housing, the seals remain flush to the housing. This points to using the engine at sustained higher

revolutions in applications such as an electric generator. In vehicles this leads to series-hybrid applications of the engine.

Slow Combustion. The combustion is slow as the combustion chamber is long, thin, and moving. The trailing side of the combustion chamber naturally produces a "squeeze stream" that prevents the flame from reaching the chamber trailing edge. This problem is sought to be overcome by direct injection in which fuel is injected towards the leading edge of the combustion chamber to minimize the amount of unburned fuel in the exhaust.



Bad fuel economy. This occurs from seals leakages, and the 'difficult shape' of combustion chamber, with poor combustion behaviour, and bad Mean Effective Pressure at part load, low rpm. Meeting the emissions regulations requirements sometimes mandated a fuel/air ratio that is not the best for fuel economy. Acceleration and deceleration as in direct drive average driving conditions also affects fuel economy. Running the engine at a constant speed and load eliminates poor fuel consumption.

Poor emissions. As unburnt fuel is in the exhaust stream, emissions requirements are difficult to meet. This problem looks to be overcome by implementing direct fuel injection into the combustion chamber. The Freedom Motors Rotapower Wankel engine which is not yet in production, met the Ultra Low California emissions. The Mazda Renesis engine, with both Intake and Exhaust Side Ports, suppressed the loss of unburned mix to exhaust formerly induced by port overlap.

Click HERE to see a video on why the rotary engine failed.

You can read more about the Wankel engine HERE

<iframe width="800" height="450" src="https://www.youtube.com/embed/v3uGJGzUYCI" frameborder="0" allowfullscreen></iframe>

Vietnam.

In 1970, a very silly North Vietnamese decided to set himself up as a sniper and fire onto a US army base. Photographer James Speed Hensinger just happened to be on the base at the time and he captured the US

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response. The Yanks first opened up with a 40mm auto-cannon, followed by launching flares into the hills, as a pair of M-60 machine guns in guard towers began pelting the woods with hot lead.

The sniper was never found, though soldiers did discover traces of blood when they searched the area the next day. He never came back.

Beware of business scams impersonating the ACCC.

14 July 2016

The Australian Competition and Consumer Commission is warning businesses to watch out for scam emails that claim to be from the ACCC but in fact contain links that can infect your computer with malware. Several businesses have reported receiving bogus requests from the ACCC to respond to a complaint that has been made about their business, or seek payment for an infringement notice for breach of copyright.

Australian Competition & Consumer Commission

Both scams encourage the recipient to find out more by either clicking on a link disguised as a .pdf file or responding to contact details in the email. In the first scam, the embedded link is actually a .zip file that will download malware on to your computer or device. The ACCC is warning people that there are scammers trying to use the ACCC's name to try and to steal money from businesses. People should be on the lookout for ransomware, which is a type of malware that freezes your computer and demands a ransom for you to be able to access your computer again. Scammers commonly ask for bitcoins or ask you to transfer money by wire transfer but even if you pay the fee, there is no guarantee that your computer will be unlocked.

Fortunately, no money has been reported lost from these particular scams to Scamwatch yet. The emails are easy to spot as fakes and you can avoid falling victim by checking the email address of the sender before clicking on any links. Scammers have been using email addresses such as 'accc.govt.au'. Australian government agencies do no use free web based email accounts like outlook.com and their emails end with gov.au, not .govt.au. If you hover your mouse pointer over links they will generally display the real address or file name. Zip and .exe files are easily disguised as pdf files but can contain malware.

Both of the scam emails circulating are simply addressed to a non-specific 'Business Owner' and may contain errors. If you unexpectedly receive an email from the ACCC, do not click on any links or respond to contact details provided in the email. Instead, independently source contact details for the ACCC through an internet search or phone book

80,000 Collingwood Fans meet at the MCG for a "Collingwood Fans Are Not Stupid" Convention. Eddie says, "We are all here today to prove to the world that Collingwood fans are not stupid. Can I have a volunteer?" Dane Swan gingerly works his way through the crowd and steps up to the stage. Eddie asks him, "What is fifteen plus fifteen?" After 15 or 20 seconds Swan says, "Eighteen!" Obviously everyone is a little disappointed. Then all 80,000 Collingwood Fans start chanting, "Give Him Another Chance! Give Him Another Chance!" Eddie says, "Well since we've gone to the trouble of getting 80,000 of you in one place and we have the world wide press and global broadcast media here, I think we can give him another chance." So he asks, "What is seven plus seven?" After nearly 30 seconds he eventually says, "Ninety!" Eddie is quite perplexed, looks down and just lets out a dejected sigh - everyone is disheartened. Swanny starts crying and the 80,000 Collingwood fans begin to yell and wave their hands shouting, "Give Him Another Chance! Give Him Another Chance!" Eddie, unsure whether or not he is doing more harm than damage, eventually says, "OK! OK! Just one more chance...What is two plus two?" Swanny closes his eyes, and after a whole minute eventually says, "Four!" Throughout the stadium pandemonium breaks out as all 80,000 Collingwood fans jump to their feet, wave their arms, stamp their feet and scream... "Give Him Another Chance! Give Him Another Chance!"

The Tasmanian Vietnam Veterans State Memorial Bush Retreat.

What is the “Bush Retreat”?

It is a memorial to those 16 Tasmanians who served and lost their lives in Vietnam. The building was constructed with funds from both State and Federal Governments and was erected by veterans and professionals who donated their time and materials to the project. The 5 bedroom house is located at Dago Point, Interlaken, beside Lake Sorell in the Central Highlands of Tasmania. It was opened by Governor General Sir Phillip Bennett on the 20th January 1990. It sleeps up to 13, has tank water, a large wood fire plus all electric mod-cons including TV, Video and DVD player. Although there is no mobile phone reception, there is a telephone (03) 6254 1055 for incoming calls and emergency 000 calls.

What's in the "Bush Retreat" for my use?

Bedroom 1 – Single bunk, 2 single mattresses, 6 single blankets, 2 pillows, wardrobe, bedside table and lamp.
Bedroom 2 – Tri bunk, double and single mattresses, 9 single blankets, 4 pillows, wardrobe, bedside table and lamp.
Bedroom 3 – Tri bunk, double and single mattresses, 9 single blankets, 3 pillows, wardrobe, bedside table and lamp.
Bedroom 4 – Single bunk, 2 single mattresses, 6 single blankets, 2 pillows, wardrobe, bedside table and lamp.
Bedroom 5 – Tri bunk, double and single mattresses, 9 single blankets, 3 pillows, wardrobe, bedside table and lamp.
Bathroom – Wheel chair friendly shower, hand basin, toilet, toilet chair, shower chair, heater and first aid box.
Lounge/Dining Room/Kitchen – Large wood heater, lounge suite, TV, video, DVD, dining suite, 3 fridges, stove, sink, microwave oven, toaster, electric jug, crockery and cooking utensils.
2 wood containers – Wood, barrow, block buster, axe, hoe, shovel, tomahawk and step ladder.
Covered barbecue area – Barbecue, table & stool assembly, fire pot and 2 freezers as ice containers.
Outside toilet – Toilet only
Laundry – Twin tub washing machine and trough
Tank water pump shed – Pump, filter, 2 valves, axe, leaf blower with cord. Also broom, mops and buckets
Clothes Line – Pull out type clothes line.

What is the cost?

The nightly rental cost is $40 for 2 adults plus $10 for each additional adult. Tenants may enter from mid-day and must exit by mid-day and are asked to use what-ever is in stock, but replace when it runs out. Example – ensure that there are toilet rolls, sugar, coffee, tea and washing up liquid for the next tenant.

Who can book?

Any adult who is eligible to be (you don't have to be) a member of the "Vietnam Veterans Association Australia" may book. That means Vietnam Veterans, their partners, adult children and adult grand-children. Also, any adult member of the "Peacekeepers and Peacemakers Association" may book.

How do I book?

Bookings are made by ringing Tamara Abbott at the Tasmania Branch RSLA on (03) 6242 8900 or email tamara.abbott@rsltas.org.au

How do I pay?

- By cheque to "Viet Vets Memorial Fund" send to Tas. RSLA, PO Box 147, NEWTOWN, TAS, 7008.
- Direct debit to Viet Vets Mem. Fund, BSB 807.009, Account Number 12149527, Reference – your name.

Keys are available on showing your receipt at the following:

- The RSLA Tasmania Branch, 206 Newtown Road, NEWTOWN, Hobart, TAS 7008, (03) 6242 8900
- The Launceston RSL, 313 Wellington Street, LAUNCESTON SOUTH, TAS 7249, (03)6344 9584
- The Devonport RSL, 18 Mac Fie Street, PO BOX 365, DEVONPORT TAS 7310. (03) 6424 2673 devonportrsl@netspace.net.au Paul Barker.
- The S tHelens RSL, 35 Quail Street, ST HELENS TAS 7216, (03) 6376 1372.

What do I need to take with me?

- Bedding – Your towels, sheets and pillow slips plus favourite pillow and doona. There are some single blankets and pillows.
- Food, drinks, warm clothing for bush walking, fishing gear, a book or DVDs.

How do I find the Bush Retreat

- From Hobart – Travel North up the Midlands Highway to Oatlands. Turn left onto Interlaken Road (C526). Keep left and drive between the 2 lakes then turn right into Dago Point. Follow the red roosters to the right and you are there.
- From Launceston – Travel South down the Midlands Highway to Tunbridge. Turn right up the Tunbridge Tier on (C526) until you are between Lake Sorell and Lake Crescent.

Turn right about 2km past the connecting channel into Dago Point. Drive a few hundred meters, then follow the red roosters to the right and you are there.

- From Devonport – Travel Highway 1 to Deloraine, then (A5) along the Western shore of Great Lake to Steppes. Turn left onto (C527) to Interlaken. Turn left into Dago Point, then right following the red roosters and you are there.

PLEASE NOTE

If you are staying at the "Retreat" in the Winter, you may get lots of SNOW, so be prepared. Don't forget your CHAINS and a little extra food and medication, just in case you get snowed in. Lake Sorell is closed for Carp eradication, but Lake Crescent has large trout in season and the Great Lake is open all year round, so fishing gear could be handy.

On arrival Process of unlocking

1. Using the orange key, unlock the meter box and turn the power on using both switches.
2. Using the blue and the yellow key unlock the end and back doors, checking that the door will not lock you out accidentally when shut.
3. Using keys 5, 6 and 7 unlock the outside toilet, the water pump shed and the laundry.
4. In the PUMP shed, turn the blue gate valve and black circular handled valve behind the door on, then switch the pump on.
5. Using the red and green keys, unlock the large wood containers. Someone may have the fire alight by now.

On departure.

1. Clean the barbecue if you have used it.
2. Pack your bedding and tidy beds and bedrooms.
3. Check under beds, in cupboards and drawers.
4. Pack up your food and clothing.
5. As fridges will be switched off, please remove food.
6. Clean the toilets, shower and hand basin.
7. Check and clean the oven, stove, microwave oven, refrigerator, table and kitchen benches.
8. Mop the vinyl areas, vacuum the carpet and sweep around the fire place.
9. Ensure that the fire is safe and that there are sticks and wood ready for the next tenant. If the fire is cold, please set the fire for the next tenant.
10. Check that all windows are closed and locked. The sliding glass door is locked at the top with the purple key.
11. The last one out to check that all 6 doors and containers are locked, power is turned off and fuse box is locked.

If you like the bush and you're looking for somewhere different to spend a few days that won't break the bank, this would be ideal.

Increased Travel Allowances.

Travel allowances for transport, meals and accommodation under DVA's Repatriation Transport scheme increased from 1 July in line with the Consumer Price Index (CPI). The intention of the Scheme is to provide financial assistance with travelling expenses for an entitled person and their medically required attendant, not necessarily to reimburse the entire cost incurred. To claim reimbursement for transport a cost must be incurred. To receive the maximum benefit, you should travel to your closest practical health provider.

Holders of a Gold or White Card, eligible under the Veterans' Entitlements Act (VEA) are entitled to assistance towards travelling expenses when attending approved treatment. The increases apply to travel by private vehicle, as well as accommodation and meal allowances, in respect of travel for treatment purposes or disability and income support claims for all eligible veterans, war widow and widowers (entitled persons).

For any queries about travel allowances contact Veterans' Transport Services on 1300 550 454 (for metropolitan areas) or 1800 550 454 (for country areas).

Type of Allowance	Measure	New Allowance 1st July 2016	Travel with a medically required Attendant
Private vehicle	per kilometre	34.1 c	X1
Public Transport	Actual fare	Actual fare	X2
Commercial accommodation, non-capital city. Single	Per night	$140.90	X2
Commercial accommodation, capital city. Single	Per night	$167.40	X2
Attendant and Veteran sharing commercial accommodation - shared	Per night	$229.20	X1
Subsidised accommodation - single	Per night	$88.00	X2
Private accommodation - single	Per night	$44.00	X2
Meal allowance – more than 50klm but less than or equal to 200klm from your home to the treatment location	Per day	$14.00	X2

Meal allowance – more than 200klm from your home to the treatment location.	Per day	$28.40	X2

Further information is available on DVA's factsheet: *HSV02 – Claiming Travelling Expenses under the Repatriation Transport Scheme*.

The people who lived in the retirement village had small apartments but they all ate at a central cafeteria. One morning one of the residents didn't show up for breakfast so my wife went upstairs and knocked on his door to see if everything was OK. She could hear him through the door and he said that he was running late and would be down shortly so she went back to the dining area.

An hour later he still hadn't arrived so she went back up towards his room and she found him on the stairs. He was coming down the stairs but was having a hell of time. He had a death grip on the hand rail and seemed to have trouble getting his legs to work right. She told him she was going to call an ambulance but he told her no, he wasn't in any pain and just wanted to have his breakfast. So she helped him the rest of the way down the stairs and he had his breakfast.

When he tried to return to his room he was completely unable to get up even the first step so they called an ambulance for him. A couple hours later she called the hospital to see how he was doing. The receptionist there said he was fine, he just had both of his legs in one leg of his boxer shorts.

Overseas travel.

If you're travelling overseas in the near future, there are a few things you should do before you go. Number one, two and three is to take out travel insurance. If you get sick or break something overseas, you could firstly be up for huge buckets of money and secondly, depending on where you are, could be under the care of some doubtful (to say it nicely) medical practitioners. Travel insurance is a must.

Next thing you should do is study to where you're going. You should know the financial, communication, and transport facilities available in the country to where you're going well before you climb aboard the freedom bird. Luckily, 1Cover has done all that for you, and

although we have no agreement with them, we suggest you check out their tips for travel overseas.

If you're going to Bali – check HERE
If you're going to Thailand, check HERE
If you're going to the USA, check HERE
If you're going to the UK, check HERE

And if you want a quote for travel insurance, check them out HERE

A man comes home to find his mate having sex with his wife,
he grabs his 22 from the cupboard and shoots the bloke and kills him.
His wife says "carry on like that and you'll have no mates left".

Intentionally crashing a Boeing – what did we learn?

On the 1st December, 1984 a remotely piloted Boeing 720, loaded with specially formulated anti-misting Jet A, was intentionally crashed at Edwards Air Force Base to determine if the fuel would preclude or suppress a post-crash fire long enough for occupants to escape. It was a bold but ill-conceived experiment that went up in smoke.

In addition to the anti-misting kerosene (AMK) evaluation, the controlled crash also provided data on how passenger seats and other structures performed in such situations. Instrumented dummies were seated in the cabin to assess acceleration forces and cameras documented fire propagation and how well other fixtures held up. It was well planned and carefully rehearsed over four years including multiple remotely-piloted approaches to 150 feet above the ground, 16 of which included engines running on anti-misting kerosene. Engines had to be modified with degraders to chop up the AMK's long molecules so fuel would flow reliably into combustion chambers and burn like regular Jet A. Proving flights were a cautious, step by step process, incrementally feeding the AMK from a few tanks to a few engines to be sure engines ran properly.

Airlines were deeply sceptical about the whole idea and very concerned about its costs and practicality. Going forward with such a program meant, at the very least, adding more steps to fuel refining and costly fleet-wide fuel system retrofitting to accommodate the AMK's long fuel

molecules. All of this to address those extremely rare events where suppressing or delaying a post-crash fire would allow passengers to escape in an otherwise survivable accident.
The industry view was that the money could be better spent on accident prevention rather than adding costly mechanical complexity to prevent what might possibly happen in rare post-crash events. Instead airlines advocated better automation, cockpit displays and warning systems as a better use for the money. More on this later. NASA worked diligently on the project, methodically fixing remote control bugs and refining control techniques to where they were confident the old Boeing could be flown wings level into eight fixed barriers designed to slice open fuel tanks but leave the fuselage intact.

Finally, with all details complete, the crash date was set. Word went out to the airlines, manufacturers and other interested industry groups to come see the fruits of NASA's efforts. And so, everyone gathered at Edwards Air Force Base on that cool December morning several miles from the Rogers Dry Lake runway where NASA 's remotely controlled Boeing 720 loaded with 76,000 pounds of anti-misting kerosene would end its last flight. The plane lifted off, retracted its landing gear, climbed to 2300 feet then banked around and lined up to land wheels up on the spiked runway. We watched through binoculars as the 720 began its descent on a slightly steeper than normal 3.8 degree descent toward the runway. Also present was Alex Ogston, an old timer British chemical engineer who worked for Standard Oil in World War II helping develop the 100 octane gasoline that contributed to the Spitfire's success in besting the Germans in the Battle of Britain.

Ogston chatted about those long ago times and related how Messerschmitt 109s had to make do with 87 octane gas while the Brits' 100 octane fuel allowed higher manifold pressure and more power for their Merlin engines, giving them a narrow edge over their adversaries. Ogston was incredulous about what he said was "NASA's silly effort to keep jet fuel from burning."

Nearing touchdown the Boeing banked left and right then struck the ground slightly left wing down. Immediately a monstrous fireball erupted as the plane slid along. Ogston was right. Liberating tons of jet fuel in the presence of an ignition source will result in a large fire ball. Fire fighting vehicles arriving on the scene were no match for the conflagration and the plane burned for over an hour in spite of their efforts. The 720's wing wobbling Dutch roll (common in swept wing aircraft) was at the root of the pilot's control problems. Seeing that a wings level touchdown was doubtful, the remote pilot spooled up the engines apparently trying to go around but couldn't complete the manoeuvre in time. The plane struck the ground left wing down in a left skid at full thrust instead of being at idle for landing. It

then slid into the barriers, one of which sliced through the number 3 engine and passenger cabin, providing a flame path into the fuselage. The botched experiment highlighted the fallacy of carefully engineering a crash scenario to serve as the basis for retooling airliner fuel systems and reformulating jet fuel specifications.

The fireball and post-crash analysis dramatically confirmed industry scepticism about AMK, and pointed up its shortcomings as a viable safety enhancement in the real world. The effort was abandoned. But it wasn't all for naught. Analysis of fire propagation in the cabin led to new standards for fire blocking materials in passenger seats and highlighted the need for faster flight recorder data sampling rates.

The FAA estimated that 25 to 28 of the cabin's 113 occupants might have been able to exit the cabin before dense black smoke completely obscured visibility. Escape time varied from five seconds in the forward cabin to 20 seconds further back. The FAA's survivability estimates are debatable in such a fiery accident scenario because passengers often wear clothing and footwear providing almost no bodily protection and some seem only marginally able to manoeuvre into and out of seats even in normal circumstances.

In contrast to that long ago AMK experiment, consider how today's well engineered terrain awareness warning systems (TAWS), also known as enhanced ground proximity warning systems or EGPWS, have largely prevented the kind of accidents AMK was intended to make survivable. Enhanced ground prox systems were first installed in air carrier jets in 1997 and are now in over 55,000 airliners, corporate jets, turboprops, helicopters, business aircraft and military transport aircraft around the world. TAWS installations can include a worldwide terrain and obstruction database and cover all airports with paved runways 2200 feet and longer, although some systems are less inclusive depending on user needs.

These warnings did more for safety than the fanciest fuel projects.

TAWS warns pilots of terrain and obstructions with visual and audio alerts plus, on some aircraft, color-coded situational awareness terrain displays. TAWS also warns of flight dangerously close to terrain, excessive bank angle, excessive deviations from the ILS glideslope or excessive deviations from the approach descent path – as well as descents after take-off. Since EGPWS was introduced 20 years ago, the airline hull loss rate for Western built airliners has decreased about 2.5 times.

What TAWS can't do is convince overly headstrong pilots to heed warnings.

For example, on May 9, 2012, a brand new SU95-100 equipped with TAWS flew into a mountainside during a demonstration flight in IMC while the pilot in command listened to "terrain" warnings and finally, "pull-up" warnings for 36 seconds before impact. To better understand where and under what circumstances significant airliner flightpath deviations occur, Honeywell analysed five years of escape activations (2011 through 2015) on glass cockpit airliners equipped with their TAWS. There were 224 final approach premature descent events extracted from about 24.38 million flight legs operated around the world. None were reported by pilots and air traffic controllers. The event data covered the period 20 seconds before the alert through 10 seconds after and were de-identified so that they only could be used for safety analysis.

How many of these premature descents would have ended in an undershoot accident is impossible to know but it's comforting to know TAWS is doing its job around the world by alerting pilots in a manner that results in a successful avoidance manoeuvre. And because thoughtful regulators acknowledged the impracticality of AMK as a safety enhancer, we're not saddled with an unnecessary, unworkable fuel additive which would neither prevent accidents nor materially increase post-accident survivability.

See the crash HERE

Independent history of Vietnam War medical legacies is under way.

Work has commenced on an independent history that will document and analyse the medical legacies of the Vietnam War. The volume, commissioned by the Council of the Australian War Memorial, will be written by Dr Peter Yule, a research f

Dr Yule said the new volume would examine the complete range of medical issues experienced by Australian veterans, with particular focus on post-traumatic stress disorder and the health effects of exposure to herbicides. Dr Yule also said that it is essential to find out about the health concerns of veterans by talking with the veterans themselves. He emphasised that the voice of the veterans must be heard.

Director of the Australian War Memorial Dr Brendan Nelson said the history would be informed by 30 years of new knowledge and interviews with Vietnam War veterans. "This important

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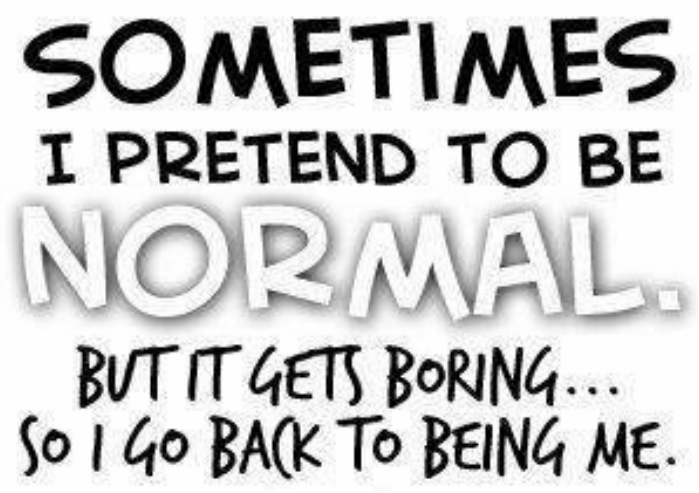
project will enable greater understanding of the implications for those Australians who served in the Vietnam War.

We cannot rewrite history, but a generation on, informed by new knowledge and a deeper understanding, we can bring a sense of informed justice and meaning to veterans still suffering." He added that the Memorial has a strong reputation for producing authoritative histories.

"Dr Yule brings a level of academic rigour that a project like this deserves. His work as an independent historian is extensive, and he has written or edited some 19 books as well as numerous articles and other publications," said Dr Nelson.

During the four-year project, Dr Yule and a team of researchers will undertake interviews with a wide cross-section of Vietnam veterans. Existing research and medical studies will also be reviewed as part of the project.

The final manuscript is expected to be completed by the end of 2019, with publication planned for 2020.



Blessed are those who are cracked,
for they are the ones who let in the light!

Ok, Ok!! – I'm going back to my room now!!

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