

ISSUE 19 – MARCH 2023

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DEMO TEAM**

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EDITORIAL

Issue 19 – March 2023



AVALON '23
Special issue

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Welcome to this special issue of **COMBAT Camera** magazine – issue number 19 – bringing you the best action from the 2023 Australian International Airshow at Avalon, Victoria.

This was my 9th Avalon airshow and, in terms of how I approached the week, it was almost a return to my youth – or at least a 24-year rewind – concentrating solely on reporting from the event.

My first Avalon airshow was in 1999, reporting for ARMY Newspaper, which I repeated again in 2001. Then, from 2003 until 2013, CONTACT was an exhibitor, meeting and greeting and introducing thousands of new and old fans to CONTACT Air Land & Sea magazine.

Our coverage of Avalon action was outsourced to a number of very talented and enthusiastic volunteer photographers from 2015 until 2019.

The show was cancelled in 2021 thanks to the 'spicy cough' and returned in impressive style in 2023, and I was back on deck – along with a new crew of volunteer photographers – to cover the Australian International Air Show as comprehensively as possible.

Coming out nearly a month after show's end, this magazine is our most comprehensive coverage of the airshow. We also pumped out several videos, photos and notes live from the venue over the course of the week, and I still have an unfinished YouTube video to come.

It was another great show at Avalon this year, with record-breaking crowds and favourable weather.

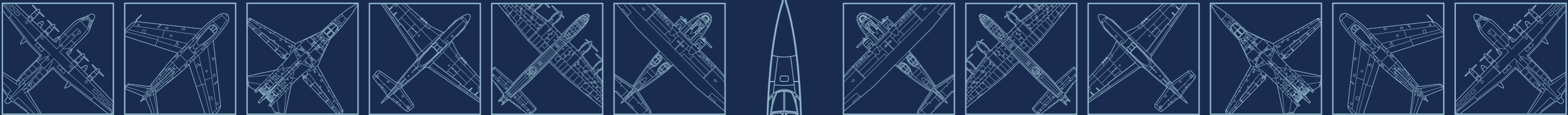
One big thing missing this year compared to my first attendance in 1999, however, was stamina. After a week of walking – nay, trudging – and looking skyward, my older bones, joints and muscles were not at all happy. I really am getting too old for this s#1t ;-)

So, on that happy note, I'll let you loose to peruse the following pages and the amazing work of this year's volunteer photographers Christabel Miglioni, Rob Hynes and John Jennings, to whom I am eternally grateful. I also slipped a few shots of my own into the mix.

I hope you enjoy this free offering.

Sincerely,

Brian Hartigan
Managing Editor



Celebrate six of the most iconic aircraft of the RAAF in this sensational collection.

Based on six original new paintings from leading Australian military aviation artist Drew Harrison, this limited-edition collection features a spectacular range of items, perfect for your home, office, or gifting.

The six iconic aircraft in this collection are the **F-111**, the **C-130 Hercules**, the **Lancaster Bomber**, the **P51-D Mustang**, the **Catalina**, and the **CAC Sabre**.

With stunning new artworks for each aircraft captured in vibrant colour by Drew Harrison, explore every range now and do not miss these limited-edition items.



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Explore the collection: militaryshop.com.au/iconic



Fire Angel

PHOTO BY ROB HYNES

A Royal Australian Air Force C-130J Hercules discharges flares during the Friday Night Alight display during the Australian International Airshow at Avalon Victoria. After four days of trade-only activities at Avalon, the gates are opened to the ticketed public about 2pm on Friday afternoon, and the action in the air doesn't stop until well after dark, which opens up a whole next level of visual air display opportunities using lights such as flares, fireworks and firewalls.





The pyrotechnics at the Australian International Airshow were pretty spectacular – although, their unannounced deployment can leave many unsuspecting camera operators dissatisfied, frustrated. But, if you're a seasoned Avalon visitor (my 11th) – and you're on site for several days – you might fluke a shot or three. Seriously, it takes prior planning, preparation, patience and a good portion of luck! – that's the 5 Ps –right? Could have been a perfect shot if that bloody Paul Bennet didn't get in the way – paulbennetairshows.com.au ;-)

OLDEST CHOPPER

PHOTO BY BRIAN HARTIGAN

Bristol Type 171 Sycamore A91-1 was designed and built in Britain. The type first flew in 1947. Royal Air Force and Royal Navy used the aircraft in air ambulance, communications and air/sea rescue roles. Royal Australian Air Force used two of these helicopters, A91-1 and A91-2, for communications work at the Woomera range in South Australia in 1956. Royal Australian Navy Fleet Air Arm used seven Sycamores between 1953 and 1965. Moorabbin Air Museum's ex-RAAF Sycamore was donated by a civilian operator in 1967 after it was severely damaged in a crash.



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THE MAN IN THE COCKPIT

WORDS AND PHOTOS BY CHRISTABEL MIGLIORINI

Major Josh 'Cabo' Gunderson was the United States Air Force (USAF) F-22 Raptor Demo Team commander and pilot since 2019 – until the Australian International Airshow at Avalon, Victoria, saw him perform his last F-22 Raptor demo flight. Cabo handed over the reins of possibly the world's coolest job to Captain Samuel 'RaZZ' Larson at Avalon after his last public crowd-wowing demo. But, before his swan-song flight at Avalon 2023, Cabo gave CONTACT stringer Christabel Migliorini a look behind the scenes with the USAF F-22 Raptor Demo Team.



F-22 DEMO TEAM



The F-22 Raptor is one of the most advanced fighter jets ever built.

Its unique combination of sensor capability, integrated avionics, situational awareness and advanced weaponry provides the USAF a first-look, first-kill capability against all enemies.

In the air-to-air configuration, the F-22 carries six AIM-120 AMRAAMs and two AIM-9 Sidewinders, while in air-to-ground configuration, it can carry two 1000-pound GBU-32 Joint Direct Attack Munitions internally.

The F-22 brings sophisticated stealth technology to the fight as well, allowing it to protect itself and stay virtually undetected from enemy radar.

Its twin engines produce around 35,000 pounds of thrust each, which, combined with sleek aerodynamic design, allows the F-22 to cruise at greater than Mach 1.5 without using afterburner

– a characteristic known as supercruise – which also expands the F-22's operating range.

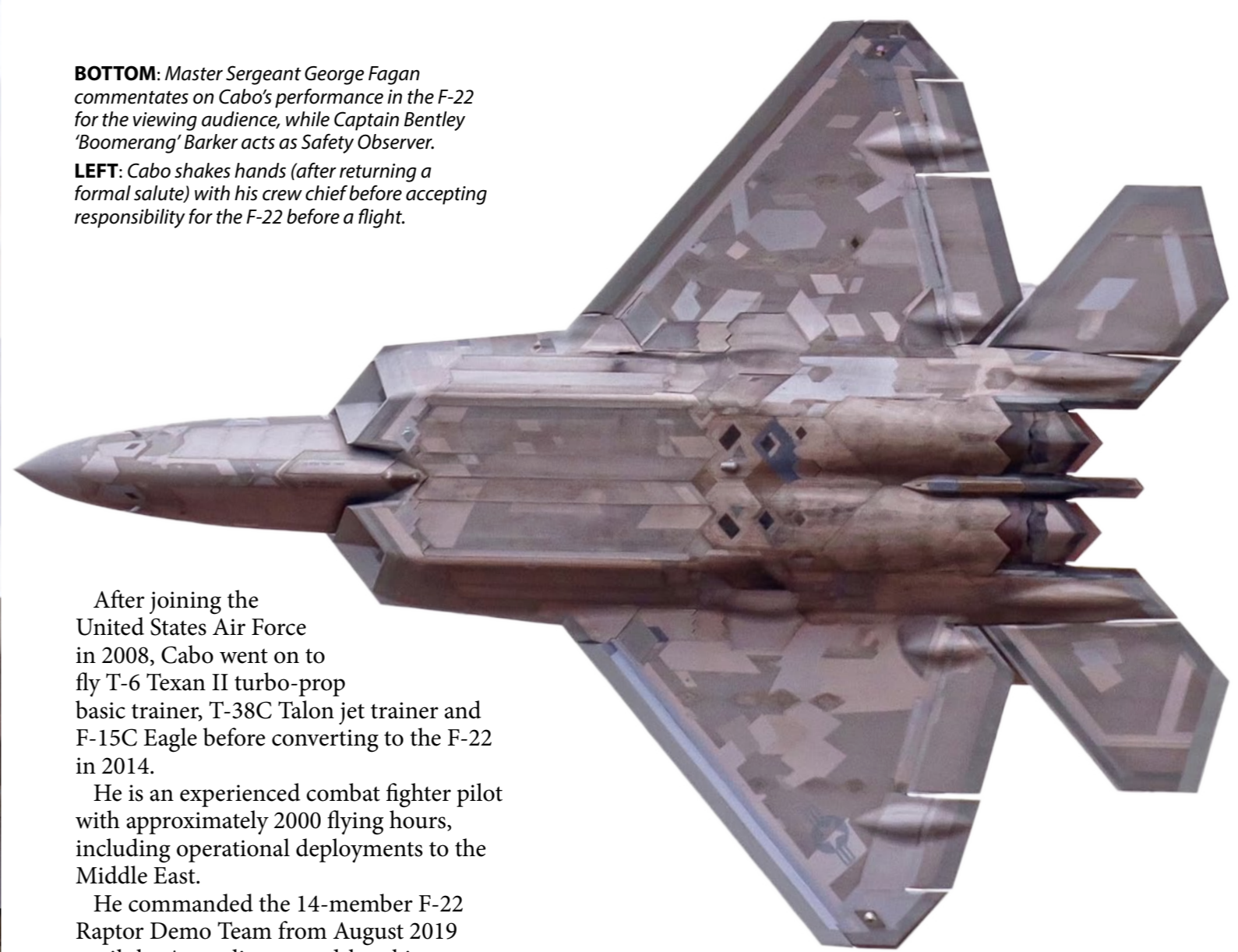
The sophisticated aero design, advanced flight controls, thrust vectoring and high thrust-to-weight ratio give the F-22 Raptor the capability to outmanoeuvre all other current and projected aircraft.

And, of course, it is this extreme manoeuvrability that so impresses aviation enthusiasts and airshow newcomers alike – especially in the expert hands of an experienced fighter pilot like Major Josh 'Cabo' Gunderson.



BOTTOM: Master Sergeant George Fagan commentates on Cabo's performance in the F-22 for the viewing audience, while Captain Bentley 'Boomerang' Barker acts as Safety Observer.

LEFT: Cabo shakes hands (after returning a formal salute) with his crew chief before accepting responsibility for the F-22 before a flight.



After joining the United States Air Force in 2008, Cabo went on to fly T-6 Texan II turbo-prop basic trainer, T-38C Talon jet trainer and F-15C Eagle before converting to the F-22 in 2014.

He is an experienced combat fighter pilot with approximately 2000 flying hours, including operational deployments to the Middle East.

He commanded the 14-member F-22 Raptor Demo Team from August 2019 until the Australian record-breaking 210,664 airshow attendees witnessed his final handling displays at the Australian International Airshow 2023.

He wowed young and old, adults and kids alike with his vertical pull at around 5Gs, brain-snapping Cobra manoeuvre, dedication pass and pedal turn to name just a few of the manoeuvres on display during the course of the airshow.

But, the life of a demo pilot is not all high-jinks and fancy flying.

Major Gunderson's day starts out with safety, air-show and aviator briefings before heading to the jet to do his final checks, ensuring his steed is in great shape for flying.

'Ownership' of the jet is formally handed over to Cabo by his crew chief with a salute, briskly returned to acknowledge the hard work of the maintenance crew and his enormous trust in his aircraft maintainers, literally putting his life on the line taking that jet airborne on the back of their hard work and expertise.



F-22 DEMO TEAM

After a hectic and physically demanding routine in the air, Major Gunderson exits the jet and heads straight over to the corralled crowd, even before getting out of his flight suit, despite the radiant heat bouncing off the tarmac on the already 30-plus degree day.

Hundreds of adults and children patiently wait to meet him, applaud and talk to the mere mortal who just did mind-bending things with 20 tonnes of aircraft.

Cabo takes his time with each person, giving them his full attention, answering questions, posing for pictures, signing autographs and handing out dozens of F-22 Raptor stickers that will surely be treasured for years by children dumbstruck at meeting a real-life F-22 demo pilot.

LEFT: Major Josh 'Cabo' Gunderson talks to fans at the Avalon Airshow immediately after a very physical demo flight in the F-22.

BOTTOM: An F-22 Raptor Demo Team member removes wheel chocks shortly before Cabo taxis the jet ahead of his next demo flight.



F-22 DEMO TEAM

Major Josh 'Cabo' Gunderson's crew chief helps him get settled into the cockpit of his F-22 Raptor before another hi-powered demo flight.

Just before his very last flight at Avalon, beneath a cooling air conditioner, Cabo sat with CONTACT stringer Christabel Migliorini and revealed some surprising and heartfelt insights on his time with the F-22 Raptor Demo Team.

Can you tell me how long you've been with the US Air Force?

Yeah, I've been with Air Force since May 2008. I started with the Air Force Academy in June of 2004. I was four years in school there and then started with the Air Force as an officer in 2008.

Can you explain your personal thoughts and feelings about being a demo pilot?

Being a demo pilot is by far the best job in the Air Force. And that's for a couple reasons. First and foremost, you know, as a kid growing up, having no family background in aviation, no family background in the military, I went to airshows as a young kid, just like those out there.

I met the demo pilot when I was 11 years old and, unknown to me then, I would meet him again 12 years later. His name was John 'Screech' York and I met him again as one of the instructor pilots at F-15 school. So, I know the impact demo pilots can make on so many kids, in a very large audience – it's pretty significant.

What's even crazier is that that same demo pilot – Screech – the same year I met him, he also met another young kid at another show down in Davenport, Iowa, and that kid was Sam 'RaZZ' Larson, who's now taking over from me as F-22 Raptor Demo Team leader. So this one person influenced at least two kids who grew up to be F-22 pilots, who are currently demo pilots. There are fewer than 800 pilots who have ever flown the F-22 in the world, and the fact that this one guy influenced us two guys who are now in that very elite group of people – crazy.

So anyway, Screech was my instructor pilot when I was going through F-15 school, and now that I'm a delta pilot, he and I talk probably weekly.

RAZZ DEMO TEAM



In fact, there are currently only eight delta pilots qualified as Raptor demo pilots – so RaZZ and I are one quarter of that product, and that one person is responsible for it. So to me meeting those kids is really important. What we can do at airshows, influencing kids – I love that aspect.

Our team will also travel around and go to schools talking to kids too. We do probably two or three school visits every single show we go to. So over 20 to 25 locations every year we're talking to multiple schools at every one. And then we also do a bunch of zoom calls throughout the week as well. So the impact we have on other people is probably the most enjoyable part of this job.

The flying is fun and it's cool, and you get to go on 'vacations' – it's neat – but really the impact you can make on other people's lives and helping them realise their dreams – or at least realise that dreams are possible – that's real cool too.

What is your favourite memory or highlight of being on the team?

I'd say flying my home show. I got to fly the show at MacDill Air Force Base in Tampa, Florida. That's where I



Major Josh 'Cabo' Gunderson conducts his pre-flight inspection on his F-22 Raptor at Avalon.



RIGHT: Major Josh 'Cabo' Gunderson farewells a member of the F-22 Raptor Demo Team following his last flight as the team boss.



saw and met Screech. Plus, I had been in the Air Force flying airplanes for about 15 years by then and a lot of my family had never even seen me flying. They'd seen pictures and videos, but never seen it in person. So, being able to go back to my home town where I know the airshow first hand, where I caught 'the bug', where I got to meet Screech – and my family's there all excited to see the show. To have all those things converge in one location was really special for me. **What does the Australian International Airshow mean to you?**

Avalon is a really important place because it's where I got my air show started. I wasn't officially a demonstration pilot that time. The official demonstration pilot was at a training conference, so couldn't make the show, so they asked me to go fly this show and do a modified demonstration. That was very, very low key compared to what I do now.

Also, when I left the F-15 to go to F-22, I was in a training course with an Australian exchange pilot – 'Gradz' Grady. I flew with him for three years in Alaska. He's here today – he came right now to watch my last show, which is awesome. So you know, having that connection with Australia just in terms of the Royal Australian Air Force, defence forces at large – and then this location, for my first and last demo, is really cool.

You know, I started my demo career here and I'm closing out my Air Force demonstration career here – in fact, I'm closing out my Air Force career in terms of flying – so it is a really important place for me. It started one of the most important periods of my time in the United States Air Force.

Thank you so much. I appreciate your time. Thank you for speaking with CONTACT and giving us a real insight into the fabulous F-22 Raptor Demo Team.

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FINAL



Nicknamed 'Rhino', the RAAF's F/A-18F Super Hornet was one of the air shows stars – noise, in-air flares, ground-based pyrotechnics – and stunning flying in the capable hands of first-time air-show demo pilot 'Woody'. The Royal Australian Air Force operates 24 F/A-18F Super Hornets, which work closely with F-35A Lightning IIs and EA-18G Growlers to give Australia a cutting-edge air-combat capability. Australia's F/A-18F Super Hornets achieved Final Operational Capability in December 2012. They are operated by Number 1 Squadron at RAAF Base Amberley, in south-east Queensland.

The twin seat F/A-18F Super Hornet can undertake:

- air interception
- air combat
- close air support of ground troops
- interception of supply lines including shipping

PHOTOS BY JOHN JENNINGS

Super Harrier

Specifications

Manufacturer	Boeing
Role	Multi-role fighter
Crew	<ul style="list-style-type: none">▪ Pilot▪ Weapon Systems Officer
Length	18.3m
Height	4.9 m
Wingspan	13.6m
Weight	<ul style="list-style-type: none">▪ 13,387 kg basic▪ 29,900 kg maximum take-off weight
Engines	Two F414-GE-400 turbofans RAAF web site says 44,000lbs thrust each manufacturer says 22,000lbs thrust each
Range	2,700 km
Ceiling	50,000 feet
Max speed	1,960 km/h (Mach 1.6)
Capacity	<ul style="list-style-type: none">▪ Mission computers▪ Heads-up Displays▪ Radar and Infrared Sensing and Targeting Systems▪ Electronic Warfare and Infra-Red Self Protection Systems
Weapons	<ul style="list-style-type: none">▪ AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM)▪ AIM-9X "Sidewinder" Short Range Air-to-Air Missile▪ Joint Direct Attack Munition (JDAM) and Laser JDAM▪ Conventional and Laser-Guided Bombs▪ AGM-154 Joint Stand-Off Weapon (JSOW)▪ AGM-84 Harpoon Anti-Ship Missile▪ M61A2 20mm Nose-Mounted Gun System



Flares can be discharged from most military aircraft to protect against infrared homing or heat-seeking missiles. They burn with temperatures equal to or hotter than the aircraft's engine exhaust. If an IR missile is detected, flares are released either manually or automatically in an attempt to confuse the missile. After discharging flares, the aircraft would typically pull away at a sharp angle from the flare and ideally reduce engine power to reduce the aircraft's thermal signature. If all goes well, the missile's seeker head would be confused by the change in temperature and flurry of new heat signatures, and start to follow one of the hot flares instead of the aircraft.





F/A-18H





A collection of survival gear laid out on a wooden surface. The items include a Stowaway rainbird, a compass, a multi-tool, a flashlight, a water bottle, a notebook, a hat, and a backpack. The gear is arranged in a way that showcases each item, with some items like the rainbird and hat featuring camouflage patterns. The background is a rustic wooden plank surface.



militaryshop.com.au

KOREA'S



PHOTOS BY JOHN JENNINGS



BLACK EAGLES

BLACK EAGLES

PHOTOS BY BRIAN HARTIGAN

Black Eagles are the Republic of Korea Air Force Demonstration Team, who deliver very professional and polished flying performances through highly choreographed manoeuvres. Black Eagles is composed of eight elite pilots flying the Korea-made T-50B supersonic advanced jet trainer and light combat aircraft, developed by Korea Aerospace Industries with Lockheed Martin. The T-50B is South Korea's first home-grown supersonic aircraft and one of the world's few supersonic trainers. The Black Eagles maintain a very busy schedule, participating in more than 50 airshow events annually. They were very impressive and entertaining at Avalon 2023.



Romet



PHOTO BY JOHN JENNINGS

The MH-60R Seahawk is the Royal Australian Navy's submarine hunter and anti-surface warfare helicopter. MH-60R is equipped with highly sophisticated combat systems designed to employ Hellfire air-to-surface missiles and the Mark 54 anti-submarine torpedo. Primary missions for the 'Romeo' helicopter are anti-submarine warfare and anti-surface warfare. Secondary missions include search-and-rescue, logistics support, personnel transport and medical evacuation. The Royal Australian Navy loves its 24 Romeos.

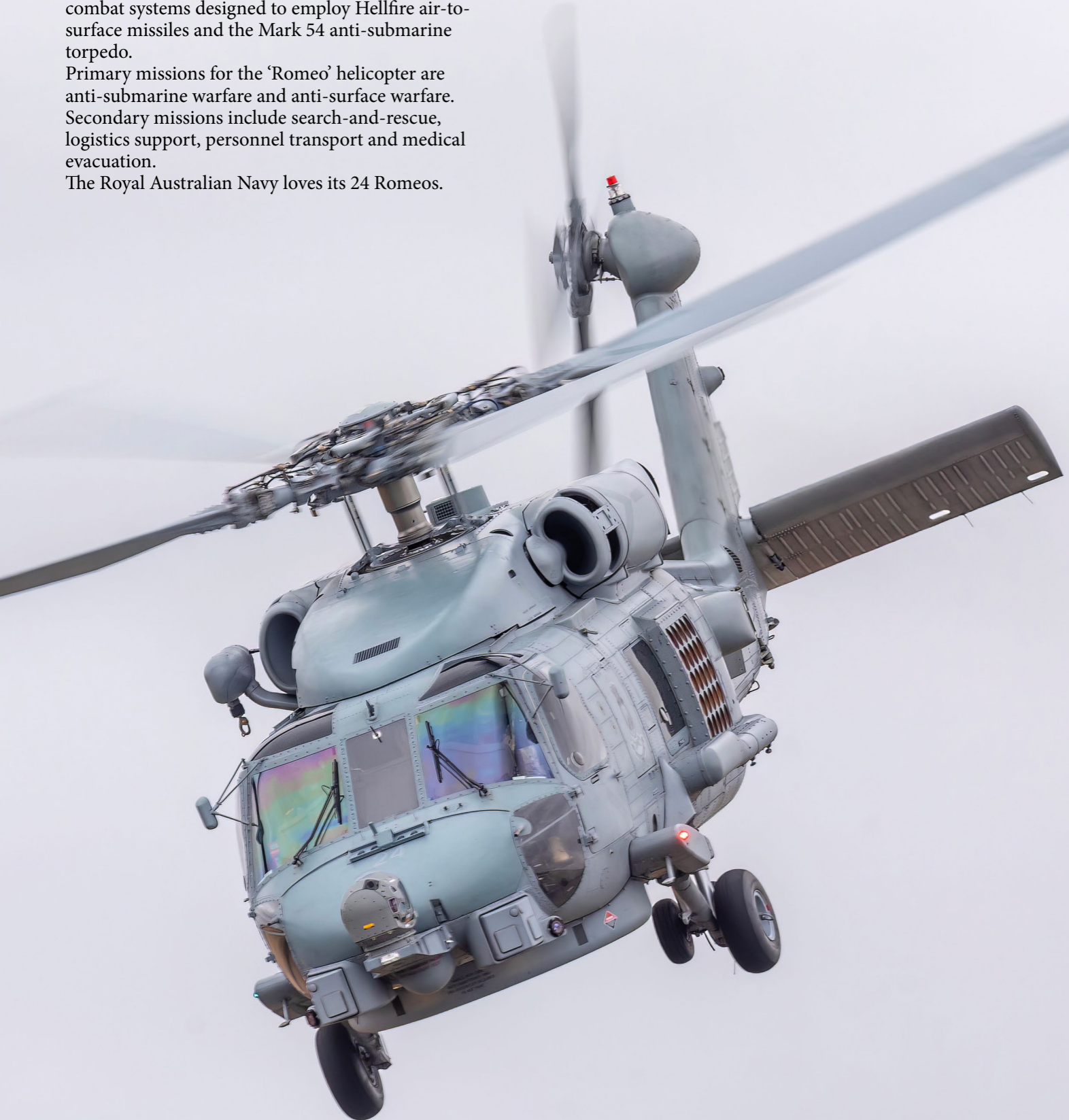


PHOTO BY JOHN JENNINGS

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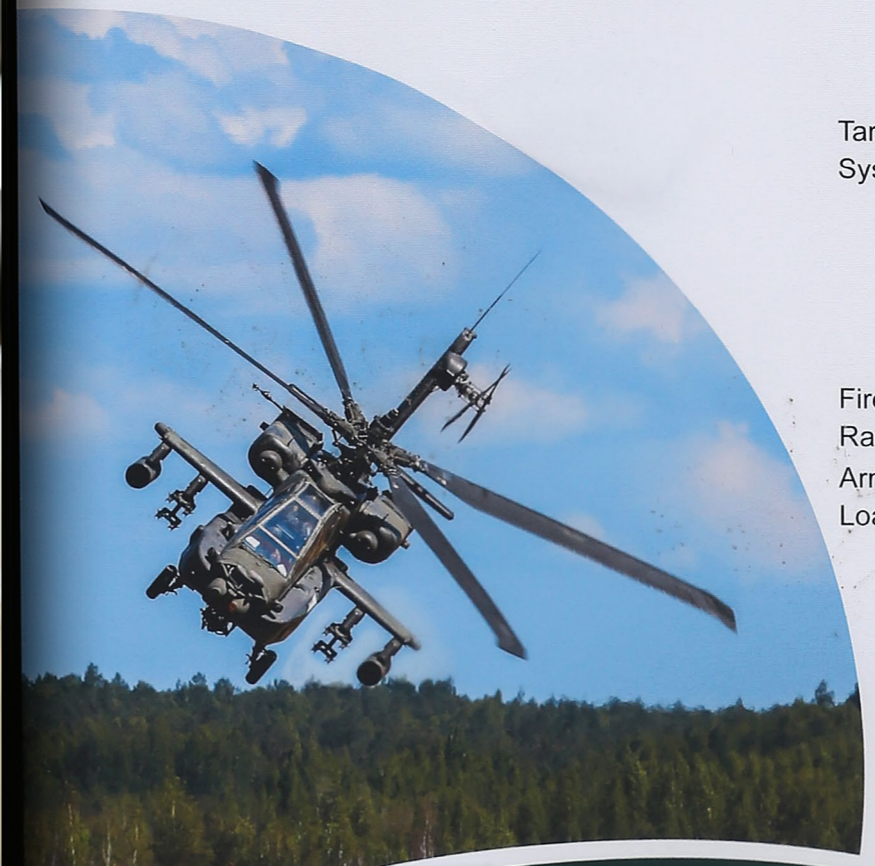



AH64E

APACHE GUARDIAN

The AH-64E is the most modern configuration of the Apache and is ready for the MDO battlefield. A network-centric, fully integrated weapon system specifically built to dominate in a highly contested and complex battle space, the Version 6 Apache includes multiple enhancements to the aircraft's sensors, software and weapons performance.

Manufacturer	Boeing
Endurance	3.0 Hours
Weight	20.260 LBS
Speed	MAX 180KTAS / Cruise 120KTAS
AC Systems	<ul style="list-style-type: none">• 2xARC-231 Radios (Cipher)• 2xFM Radios (Cipher)• SATCOM• Link• Blue Force Tracker• MUM-T• Laser spot Tracker• Boresighted IZLID• Low Light Camera
Targeting System	<ul style="list-style-type: none">• MTADS Modernised Target Acquisition System• FLIR 3.0 Km PID• Day TV 5.0 Km PID• Laser range Finder / Designator• Laser spot Tracker
Fire Control Radar System	Detect, ID, prioritise targets at up to 8.0 Km range.
Armament Loadout	<ul style="list-style-type: none">• M230 30mm Chain Gun• 2.75" Rockets• AGM-114 Hellfire Missile





In January 2021, the then Liberal government announced that Australia would buy 29 AH-64E Apache helicopters to replace the 22 Tigers currently in service. That's a whole extra squadron's worth. The new helicopters are expected to start arriving in 2025 – possibly before the next Avalon Airshow! – with the Tigers being retired about 10 years ahead of schedule.

Photos by Brian Hartigan

AH64E APACHE

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Kawasaki C-2

Kawasaki C-2 is a home-grown Japan Self Defence Force military transport aircraft capable of Mach 0.8 (allowing it to cruise at commercial-airline heights) with ferry range of around 9500km – more with in-air refuelling. It has two commercial-airliner-derived General Electric turbo-fan engines, similar to those used on Boeing 747-400 or Airbus A300. With a max payload of around 38 tonnes, it is bigger than a C-130J (19 tonnes), smaller than a C-17A (77 tonnes) and similar in capacity to an Airbus A-400M. It can take off and land on runways as short as 500m. The Japanese government has ordered 22 C-2s for JSDF and is also actively pursuing export opportunities.

Flying photos by Brian Hartigan
Ground photo by Rob Hynes



C-17A



PHOTO BY BRIAN HARTIGAN

Globemaster

The C-17 Globemaster III is a large military transport aircraft designed by McDonnell Douglas, later acquired by Boeing. The first production aircraft was delivered to the USAF in 1993, with the first squadron operational by January 1995. The United States Air Force eventually took delivery of 224 C-17s. Production continued until 2015, with 279 aircraft built. C-17s are operated by the US, UK, Australia, Canada, India, three Middle East countries and the NATO Strategic Airlift Capability. Australia operates eight C-17A Globemaster IIIs, with No. 36 Squadron at Raaf Base Amberley, near Brisbane.



Able to carry up to 77 tonnes of cargo, the C-17A's cargo bay can accommodate

- 1 Abrams tank
- 3 Black Hawk helicopters, or
- 4 Bushmaster IMVs

PHOTO BY ROB HYNES



PHOTO BY CHRISTABEL MIGLIORINI

C-130J-30



PHOTO BY BRIAN HARTIGAN

Hercules



C-130J-30 Hercules is a medium-sized tactical air-lifter which can deliver cargo to airfields with short unsurfaced runways, and airdrop paratroops and cargo by parachute. The Royal Australian Air Force operates a fleet of 12 C-130J-30 Hercules by No. 37 Squadron based at RAAF Base Richmond. They were delivered to the RAAF between 1999 and 2001.

The Australian Defence Force relies extensively on C-130J-30 when deploying personnel and aid. The aircraft can also be used in other roles, such as search and survivor assistance, and medical evacuation. C-130J-30 Hercules can carry up to 124 passengers, or eight pallets of cargo up to 19.5 tonnes. Upgrades to Australia's Hercules have enhanced communications and information-sharing, and improved the aircraft's endurance during battle.

PHOTO BY ROB HYNES

Hercules



C-130 Hercules primarily performs the tactical portion of the airlift mission.

The aircraft is capable of operating from rough, dirt strips.

Its propellers can enter negative pitch, enabling the aircraft to reverse on the ground.

C-130 can be rapidly reconfigured for various types of cargo, such as palletised equipment, floor-loaded material, airdrop platforms, container delivery system bundles, vehicles and personnel, including stretchered patients for aeromedical evacuations.

C-130J incorporates state-of-the-art technology, which reduces manpower requirements, lowers operating and support costs and provides life-cycle cost savings over earlier models.

Compared to older C-130s, the J model climbs faster and higher, flies farther at a higher cruise speed, and can take off and land in a shorter distance.

The C-130J-30, as operated by the Royal Australian Air Force, is a stretched version, with 15 feet added to the fuselage, increasing usable space in the cargo compartment.

Australia's Hercules are fitted with a Ka-Band SATCOM system (the hump on its back, forward of the wings), which offers broadband Internet connectivity for passengers who may be about to step off the ramp in hostile tactical situations.



PHOTO BY ROB HYNES

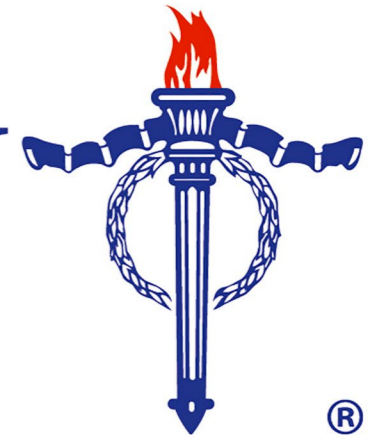
UNUSUAL INTERESTING CONCEPT

Aussie company Pegasus International Group had two flying-car prototypes on static display at Avalon. The vehicles are not yet certified to fly, but have been off the ground in testing. When ready for sale, the company says they will cost in the super-car range. Visit bepegasus.com for more info.



PHOTO BY BRIAN HARTIGAN

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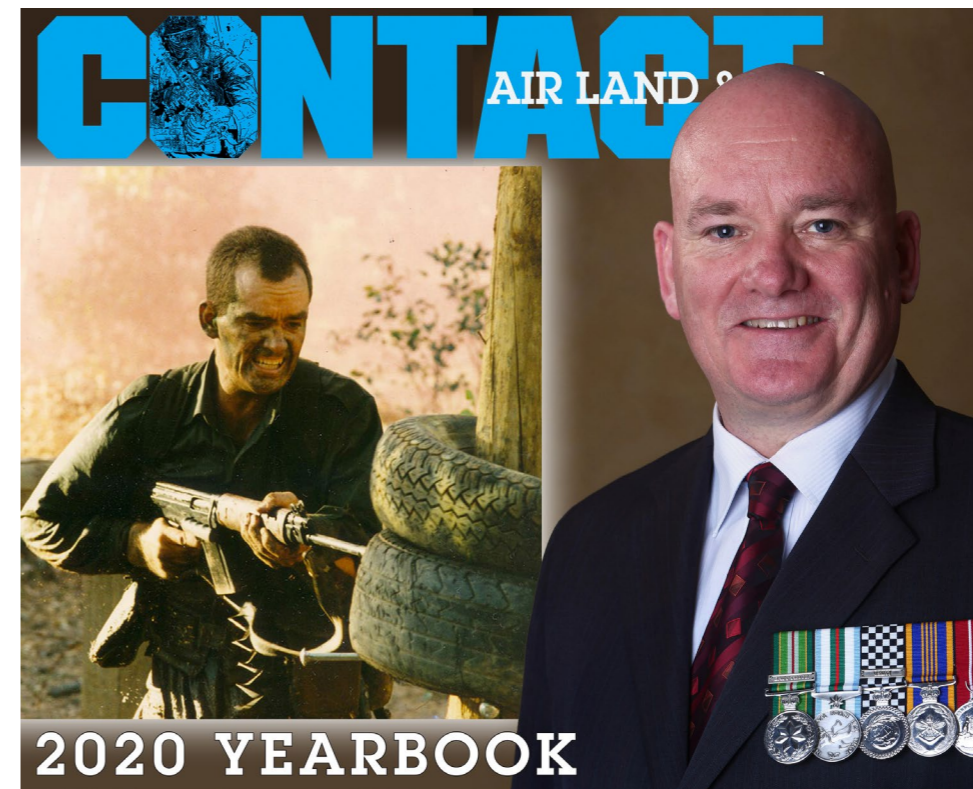
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This example shows CONTACT Editor Brian Hartigan at Kapooka in 1990, and on ANZAC Day 30 years later

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Poseidon

P-8A Poseidon is Australia's multi-mission maritime patrol aircraft with 12 of the type operated by No. 11 and No. 292 Squadrons at RAAF Base Edinburgh under command of No. 92 Wing. Poseidon has deployed on a wide array of operations and exercises since its first arrival in 2016, ratifying its high capability to generate effects in its primary roles of:

- anti-submarine warfare
- anti-surface warfare
- search and rescue
- maritime intelligence, surveillance and reconnaissance
- overland intelligence, surveillance and reconnaissance

Based on the commercial design of Boeing's 737-800, the P-8A is substantially modified and built specifically as a military aircraft to include:

- a weapons bay
- under wing hard points for weapons
- under fuselage hard points for weapons
- sonobuoy deployment system
- increased structural strength for low level operations (down to 200ft).



Poseidon has an advanced mission system and integrated sensor suite, including:

- a multi-role radar
- an electro-optical camera
- an electronic signal detection system
- a high-capacity acoustic system
- an extensive communications suite.

Internal fuel capacity of almost 34 tonnes allows the P-8A to conduct low-level anti-submarine warfare operations more than 2000 kilometres from base and it can be refuelled in the air.

PHOTO BY ROB HYNES

Wedgetail



The E-7A Wedgetail provides Australia with one of the most advanced airspace battle management capabilities in the world.

Wedgetail's ability to coordinate a joint air, sea and land battle in real time significantly increases the effectiveness of the Australian Defence Force as a whole. Operated by No. 2 Squadron, the Royal Australian Air Force's six E-7A Wedgetails are based at RAAF Base Williamtown, near Newcastle, NSW.

Based on the Boeing 737-700 series aircraft, the Wedgetail has been heavily modified, including the addition of its iconic rooftop 'surfboard' radar.

The Northrop Grumman Multi-Role Electronically Scanned Array (MESA) radar and 10 crew consoles (with room for two more) allows the Wedgetail to simultaneously track dozens of airborne or surface targets. The radar can also 'stare' at targets of interest while continuing to scan.

Wedgetail was initially designed for the Royal Australian Air Force and is now also operated by Türkiye and South Korea, with the USAF expected to receive 26 of the type by the end of the decade.

During a standard mission, the E-7A Wedgetail can scan more than four million square kilometres and is capable of unlimited long-range deployment thanks to in-flight refuelling.

PHOTO BY ROB HYNES

MRTT



The KC-30A Multi-Role Tanker Transport (MRTT) is a heavily modified Airbus A330 airliner that allows the Royal Australian Air Force to conduct air-to-air refuelling and provide strategic air lift. No. 33 Squadron operates seven KC-30A based at RAAF Base Amberley, near Brisbane, Queensland.

The KC-30A MRTT is fitted with two forms of air-to-air refuelling systems – an Advanced Refuelling Boom System mounted on the tail of the aircraft and two hose-and-drogue pods under each wing. These systems are controlled by an air-refuelling operator in the cockpit, who can view refuelling on 2D and 3D screens.

KC-30A can carry a fuel load of more than 100 tonnes, 50 of which is available for offload to other aircraft.

The tanker can travel 1800km from its home base and loiter for up to four hours, dispensing fuel to a wide range of aircraft types, including all of the RAAFs and most of the USAF's and other foreign fleets.

In its transport role, KC-30A is capable of carrying 270 passengers, with under-floor cargo compartments that can accommodate 34 tonnes of military and civilian cargo pallets and containers.

KC-30A features advanced communication and navigation systems, and an electronic warfare self-protection system to shield against threats from surface-to-air missiles.

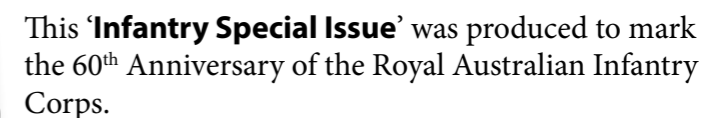
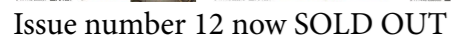
Stratofortress



PHOTO BY ROB HYNES

Boeing's B-52 Stratofortress is an American long-range, subsonic, strategic bomber, first delivered to the US Air Force in 1955. Of the 742 B-52s built, 76 are still in service, the last of which are scheduled to remain in service until the mid 2050s. The aircraft in this photo, which made two passes over the Australian International Airshow at Avalon, Victoria, on Saturday was a B-52H, registration number 60-0025 and nicknamed "Old Crow Express II". She was built in 1960. "Old Crow Express II" is based at Barksdale Air Force Base, Louisiana, and stopped over in Darwin on her way to Avalon.

THE AUSTRALIAN MILITARY MAGAZINE



Three promotional banners for magazine subscriptions are displayed side-by-side. Each banner has a colored top section with the word "OFFER" and five stars. The blue banner offers 6 magazines for \$30. The orange banner offers 15 magazines for \$60. The green banner offers 41 magazines for \$120. A red starburst at the bottom right states "JUST \$2.93 EACH".

Color	Number of Magazines	Total Price	Price per Magazine
Blue	6	\$30	\$2.93
Orange	15	\$60	\$2.93
Green	41	\$120	\$2.93

MAIL INCLUDED

KC-10

Big Sexy

**PHOTOS BY
CHRISTABEL MIGLIORINI**



KC-10A Extender – or ‘Big Sexy’ to her friends – is a US Air Force multi-role tanker transport, built in the early 1980s and destined for retirement in the very near future. In fact, this visit to Avalon may be the last time this magnificent bird graces Australian skies, with tail number 83-0078, which was on static display at Avalon, due to retire in October and the remainder of her sisters consigned to the boneyard by the end of next year. KC-10A is a hefty beast at 268 tonnes fully loaded. She can dispense 159 tonnes of fuel to other aircraft by either hose-and-drogue at a rate of 1.8 tonnes per minute or via a ‘flying boom’ at 4.5 tonnes per minute. She can also carry 77 tonnes of cargo (same as C-17) arranged over 25 pallets with 16 passengers, or 17 pallets and 75 passengers. Sixty KC-10s were built for and operated by the USAF with two KDC-10s built for the Dutch. They will be replaced in US service by KC-46 Pegasus multi-role tanker transports, based on an upgraded Boeing 767 commercial airliner.



KC-10 pilot Captain Kevin Cabusora speaks with eager visitors.

KC-10 crewman Staff Sergeant Edwin Gomez-Rivera prepares to sample some Aussie delicacies. Lamington was the winner. Vegemite – “very salty”.



Wandering Warriors is a charity dedicated to providing care, support and opportunities to veterans and their families through mentoring, education, employment, events and other services.

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Introducing AIRSHOWS DOWNUNDER Shellharbour

AMDA Foundation Limited – the organiser of the Australian International Airshow at Avalon, Victoria – will become the new operator of the Wings Over Illawarra Airshow from 2024, after signing a 10-year licence agreement with Shellharbour City Council.

The air show will remain at Shellharbour Airport south of Wollongong, NSW – but will undergo a name change, be reduced to biennial and increased to a three-day event.

Next year's Airshows Downunder Shellharbour is scheduled for 1 to 3 March 2024, then every even-numbered year in rotation with Avalon in the odd-numbered years.

AMDA Foundation CEO Justin Giddings said Wings Over Illawarra had built an excellent reputation as an event for the general aviation and light sport aviation

communities in Australia.

"It has an exciting airshow covering the breadth of vintage, warbird and modern aviation and a highly regarded careers and skills day to help attract the next generation," Mr Giddings said.

"It also provides an important means of promoting general aviation to the general public.

"AMDA Foundation intends to build on that and create an event that promotes the Australian general aviation industry, while providing an exciting airshow for all the family."

Wings Over Illawarra founder Mark Bright said AMDA Foundation's resources and expertise would help the event achieve his original vision.

"Wings Over Illawarra was created to give the general

public a great airshow and help promote affordable recreational aviation in Australia," Mr Bright said. "AMDA Foundation's great experience and resources will take the airshow to the next level.

"Their experience in operating major events such as the Australian International Airshow will help the airshow grow and increase its ability to promote aviation in Australia."

Shellharbour City Council CEO Mike Archer said

AMDA's expertise and experience in the aviation industry would help transform the city's airshow into a nationally and internationally significant aviation event.

"This is an exciting opportunity to bring even more people to Shellharbour City, further cementing our local-government area as a top tourism destination," Mr Archer said.

AMDA Foundation Limited is an Australian not-for-profit corporation established to promote the development of aviation and Australia's industrial, manufacturing and information/communications technology resources in the fields of aviation, aerospace, maritime, defence and security.



AMDA Foundation now operates...

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INDO PACIFIC International Maritime Exposition

LAND FORCES International Land Defence Exposition

ROTORTECH Helicopter and Unmanned Flight Exposition, and

AIRSHOWS DOWNUNDER Shellharbour

PHOTO BY BRIAN HARTIGAN at Wings Over Illawarra 2023

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That's all folks
**until
next time**



PHOTO BY ROB HYNES