



# ARSAG INTERNATIONAL

## Aerial Refueling Systems Advisory Group

NEWSLETTER November 2019

### From the desk of the Chairman

As we approach the completion of another ARSAG calendar year, I have been reflecting on the extraordinary spirit of cooperation that has come to be identified with ARSAG. As aerial refueling technology becomes more advanced and the entry of new nations into the aerial refueling community requires greater operational coordination, ARSAG strives to provide a "home base". I wish to commend all those representatives of military/government and industry who so willingly sit down together to exchange experiences, apply technical advances and share the data that allows for the standardization that is fundamental to aerial refueling. ARSAG participants provide current briefings, status reports and seminars in our annual meetings and develop aerial refueling standardization documents in ARSAG's twice-yearly Workshops / Meetings of the Joint Standardization Board (JSB) for Aerial Refueling Systems.

I take my hat off to all of our allied military forces and to the airframe and hardware providers who unite in ARSAG to make the critical, interactive function of aerial refueling achievable and safe. We are planning for another year in 2020 that will gather the world-wide experts in aerial refueling under one ARSAG umbrella. We look forward to welcoming you, recognizing your contributions and expediting your endeavors.



JOHN B. SAMS, JR, LIEUTENANT GENERAL, USAF, RET  
CHAIRMAN OF THE BOARD & CEO, ARSAG INTERNATIONAL

## ARSAG Registrations Open at [www.arsaginc.com](http://www.arsaginc.com)

### Winter Meeting

#### Panel Chairs and Steering Group Planning Meeting

**4 February**

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#### ARSAG Workshop / Joint Standardization Board (JSB) for Aerial Refueling Systems

**5 – 6 February**

Holiday Inn  
Dayton (Fairborn) Ohio

*(Hotel Reservation Link on Registration Page)*



### Annual Meeting

## ARSAG 2020

**21 – 23 April**

Renaissance Hotel  
Cleveland, Ohio

*(Hotel Reservation Link on Registration Page)*



**To reserve Exhibit Booth Space**

Contact Thomas Coggeshall at [thomas@arsaginc.com](mailto:thomas@arsaginc.com)

## EDA / NATO Air-to-Air Conference in Brussels

By: Tom Swiderek, Omega Air. 22 October 2019

The European Defense Agency (EDA) and North Atlantic Treaty Organization (NATO) co-hosted its second annual Air-to-Air Refueling Conference on 17 Oct 2019 at the EUROCONTROL facility in Brussels, Belgium. Also, for the second year in a row, this event was moderated by ARSAG Chairman/CEO, Lt Gen John Sams, USAF, ret.

Gen Sams began the conference with a discussion of where we have come as an AAR community since the EDA/NATO AAR meeting last year. He stressed the need for nations to support their aircrews by ensuring the processes and procedures are in place to reduce the risks as much as possible to the warfighters so the aircraft commanders don't need to assume risks in the field that our engineers could have eliminated through due diligence and proper focus ahead of time. He also discussed new tankers being acquired by nations as well as the rapid growth of commercially contracted AAR services as USTRANSCOM continues with its efforts to obtain 10,000 flying hours per year outsourced AAR services.

The full-day agenda provided a blend of speakers from across the two organizations and individual nations and key industry partners. The conference presentations were divided into 5 major themes, including the political, operational and industry view of AAR along with the optimization and capability development aspects of AAR. Despite this grouping of subjects, two common themes were regularly mentioned throughout the day.

First, the need for better understanding at the highest levels of each nation's military for the critical role airworthiness expertise plays when certifying a tanker for the first time or when conducting a Technical Compatibility Assessment between a tanker and a receiver. NATO and the EDA can only recommend nations embrace the importance of this critical aspect of AAR and it was identified that several nations have already made great strides to improve their expertise in this area.

The second subject addressed across the discussions was the continuing need to improve and standardize the AAR clearance process with a need for each nation to step up to implement NATO and EDA AAR recommendations.

Ank Bijleveld, Minister of Defense, The Netherlands, provided a video-feed welcome to the group and stressed the importance of all the new developments in AAR including the new pooling and sharing program for nine Multinational Multi-Role Tanker Transport (MRTT) aircraft. She also stressed the need for improved AAR clearance process. The rest of the day's line-up consisted of an array of experts from the EDA, NATO, US Air Force ARCA, and a panel discussion with representatives from four key AAR OEMs.

Having worked tanker issues for NATO more than 15 years ago, the most striking change I personally noticed while attending this event compared to AAR meetings during earlier times is the dramatic increase in the knowledge base of the speakers and the audience on critical AAR issues. Fifteen years ago, there would have been only a handful of people in the entire international arena able to address the myriad challenges facing the AAR community when trying to improve AAR effectiveness, interoperability and safety. Today, it is clear that the level of understanding of key AAR issues has increased among some key top political and military leaders and multinational organizational management. This doesn't mean that the challenges are all resolved, but as an AAR community, we have grown to better understand the challenges so we can better direct our efforts for improvement.

I also know that the many successes observed during ARSAG events have propagated to individual nations and multinational organizations allowing more dedicated and highly educated focus from AAR leadership. Remember, Nobody Kicks Ass Without Tanker Gas...Nobody!



### Aircraft Identification Contest

Congratulations to the winner of our last photo contest. Nick Wilcock was the first person to correctly identify the Curtiss XP-42.

Please send your guesses to this month's contest to [thomas@arsaginc.com](mailto:thomas@arsaginc.com). To clarify, we are only looking for the ID of the aircraft in the foreground of this month's photograph. As always, thanks for participating!



|  <b>ARSAG INTERNATIONAL</b><br>Calendar of Events  |   |
|---|---|
| 2020  |   |
| <i>Winter Meeting</i><br><br><b>ARSAG Workshop / Meeting of Joint Standardization Board (JSB) for Aerial Refueling Systems &amp; Planning Meeting for Panel Chairs &amp; Steering Group</b> | <b>4 – 6 February</b><br>Holiday Inn<br>Dayton (Fairborn) Ohio    |
| Annual Meeting<br><br><b>ARSAG 2020</b>   | <b>21 - 23 April</b><br>Renaissance Hotel<br>Cleveland Ohio       |
| <b>ARSAG Workshop / Meeting of Joint Standardization Board (JSB) for Aerial Refueling Systems</b>   | <b>15 – 17 September</b><br>Holiday Inn<br>Dayton (Fairborn) Ohio |

## Boeing KC-46A Update

It was an exciting third quarter for the Pegasus program. The program accomplished more aircraft deliveries, received a signed contract for additional tankers, supported testing of new receiver aircraft and executed agreements with the U.S. Air Force which chart the course for future program success.

As September came to a close, the U.S. Air Force signed the official DD-250 paperwork and accepted their 22<sup>nd</sup> KC-46A. This aircraft will be flown by the 22<sup>nd</sup> and 931<sup>st</sup> Air Refueling Wings at McConnell Air Force Base (AFB) in Wichita, Kansas. This brings McConnell's total fleet to 15 aircraft. Two other bases are currently flying the KC-46; Altus AFB has five and Pease Air National Guard Base proudly owns two.

Additionally in September, the U.S. Air Force awarded Boeing a contract for 15 KC-46A tanker aircraft, spares, support equipment, spare engines and wing air refueling pod kits. With this fifth production lot, Boeing is now on contract for 67 KC-46A tankers. During this same time period the program began building Japan's first KC-46. The wing spar was loaded into the Everett factory on 16 September. This is the first of two KC-46As on contract to build for the Japan Air Self-Defense Force (Koku-Heitai).

Meanwhile receiver certification testing continues to progress at a steady rate at Edwards AFB. At the end of the third quarter of 2019, the F-35A, F-16D, C-17A, F/A-18 A/B/C/D (CDS only) and KC-46A have been certified as receivers behind the KC-46A. The KC-46A tanker aircraft are certified to refuel from the KC-135. Receiver certification testing is complete for the C-5M, B-52H, EC-130H (and all C-130 variants), F-15E, F-22A, MV-22 and the KC-46 as a receiver behind the KC-10. The test data is under review and awaiting certification. Current aircraft undergoing certification testing at Edwards include the B-2A, F/A-18 Super Hornet, the RC-135 (and all C-135 variants) and the F/A-18 C/D via the Wing Air Refueling Pods.

Boeing is extremely pleased to have a clear path forward for enhancing the Remote Vision System on the KC-46A. Working collaboratively with the U.S. Air Force, Boeing developed a precise set of performance parameters to improve the current system. Work has begun on both software and hardware enhancements. The Boeing team looks forward to getting this new system to the field as quickly as possible. Similarly, Boeing is under contract for redesigning the boom to alleviate the axial load issue. During flight test it was discovered that lightweight receivers, namely the A-10, when heavily loaded with weapons and stores were having a difficult time staying connected in the extreme corners of the air refueling envelope. The redesign will allow these receivers to stay in contact in all corners of the envelope with full war-time loads. These two system enhancements are specifically aimed at closing the associated Category 1 Deficiency Reports.

The Boeing team could not be prouder of the KC-46 as it begins to make its debut in the U.S. Air Force. Boeing continues to work hand-in-hand with the U.S. Air Force to ensure they get the preeminent tanker they need. The Boeing team is looking forward to a busy fourth quarter as it accelerates the progress on the program.

Submitted by Michael Haver, Boeing



## RAAF at Exercise Mobility Guardian

from RAAF News, September 2019



The Royal Australian Air Force (RAAF) has dispatched its two largest aircraft, a C-17A Globemaster III and a KC-30A Multi-Role Tanker Transport, to the United States for Exercise Mobility Guardian.

Held in Washington State from 09-27 September, Exercise Mobility Guardian is conducted by the United States Air Force (USAF) to rehearse of key air mobility roles.

This includes air-to-air refuelling from the KC-30A, aerial delivery of cargo to drop zones by the C-17A and aeromedical evacuation training.

Most of the 100 Australian personnel deployed to this exercise are from RAAF Base Amberley in Queensland who will join more than 26 other nations and 60 aircraft.

The Australian element is led by the Commanding Officer of No. 33 Squadron, Wing Commander Sarah Stalker, who said RAAF medical, security, intelligence, aircrew, maintenance and other support personnel will be working closely with and learning from their counterparts from other Defence Forces.

"Exercise Mobility Guardian will involve participants from the US, New Zealand, UK and Canada – just to name a few," Wing Commander Stalker said.

"Our role is to work with these international partners to deliver a first stage response to emergency scenarios, providing aeromedical evacuation support, personnel recovery and refuelling to other aircraft involved.

"Air mobility is a critical part of how a modern defence force maintains its logistical links, and responds during real-world humanitarian aid and disaster relief missions."

Working alongside the RAAF's KC-30A and C-17A at Exercise Mobility Guardian are the USAF's colossal C-5M Galaxy transport, its KC-135 and KC-10 tankers, and the Royal Air Force's A400M Atlas turboprop.

"Exercise Mobility Guardian allows us to train with the best and leverage off invaluable opportunities developed by the USAF's Air Mobility Command."



Lt. Col. Kevin Parsons (center), 93rd Air Refueling Squadron commander, briefs international partners before a flight, at Fairchild Air Force Base, Wash., during exercise Mobility Guardian 2019, Sept. 16, 2019. Exercise Mobility Guardian is Air Mobility Command's premier, large-scale mobility exercise. (U.S. Air Force photo by Staff Sgt. Dustin Mullen)



U.S. Soldiers board a Royal Canadian Air Force CC-130J Super Hercules, 436 Transport Squadron, assigned to 8 Wing Trenton, Ontario, Canada, during the opening training scenario during exercise Mobility Guardian 2019, at Fairchild Air Force Base, Wash., Sept. 14, 2019. Exercise Mobility Guardian is Air Mobility Command's premier, large-scale mobility exercise. (U.S. Air Force photo by Tech. Sgt. Larry E. Reid Jr.)



U.S. Soldiers board a Royal Canadian Air Force CC-130J Super Hercules, 436 Transport Squadron, assigned to 8 Wing Trenton, Ontario, Canada, during the opening training scenario during exercise Mobility Guardian 2019, at Fairchild Air Force Base, Wash., Sept. 14, 2019. Exercise Mobility Guardian is Air Mobility Command's premier, large-scale mobility exercise. (U.S. Air Force photo by Tech. Sgt. Larry E. Reid Jr.)

## The Czech Republic joins multinational fleet of tanker-transport aircraft

On Thursday (24 October 2019), the Czech Republic joined a multinational effort to acquire and operate new tanker transport aircraft – the Multi Role Tanker Transport Capability. This initiative was launched by the Netherlands and Luxembourg in 2016 and aims to boost the ability of European Allies to refuel aircraft in mid-air.

The multinational fleet arrangement is a concrete step towards reducing the overall European shortage in air-to-air refuelling and the over-reliance on U.S. capabilities. The participants – Belgium, the Czech Republic, Germany, Luxembourg, the Netherlands, and Norway - are now awaiting the delivery of eight Airbus A330 Multi Role Tanker Transport aircraft. The first two aircraft are expected to be delivered in May and June 2020, respectively. While the aircraft will be predominantly used for air-to-air refuelling, they can also be used for the transport of people, cargo and for medical evacuation.

The initiative has been supported by NATO and the European Union. It is an example of effective cooperation between the two organizations when delivering critical capabilities for its members. The aircraft are owned by NATO and procured by the NATO Support and Procurement Agency through the Organization for Joint Armament Cooperation. *“I am pleased to see our two organizations come together in this way and hope to see more initiatives like this one in the future,”* said NATO Deputy Secretary General Mircea Geoana.

from: NATO HQ News



## Fairchild AFB reactivates 97th Air Refueling Squadron

By Staff Sgt. Dustin Mullen, 92nd Air Refueling Wing Public Affairs / Published October 23, 2019  
FAIRCHILD AIR FORCE BASE, Wash. (AFNS) --

Fairchild Air Force Base reactivated the 97th Air Refueling Squadron that has been deactivated for 15 years, during an assumption of command ceremony Oct. 18.



Col. Russel Davis, 92nd Operations Group commander, left, passes the 97th Air Refueling Squadron guidon to Lt. Col. Cindy Dawson, 97th ARS incoming commander, right, during the squadron's reactivation ceremony and assumption of command at Fairchild Air Force Base, Wash., Oct. 18, 2019. The reactivation is due to an increase of KC-135 Stratotankers that are being transferred to Fairchild AFB, along with more than 1,000 Airmen and their families. (U.S. Air Force photo by Staff Sgt. Dustin Mullen)

The reactivation is due to an increase of KC-135 Stratotankers being transferred to Fairchild AFB along with more than 400 Airmen and their families.

Fairchild AFB was chosen to support the new squadron and tankers due to a multitude of factors, including infrastructure, local area, current operations and more.

“Fairchild (AFB) is the perfect fit for these new tankers because of our demonstrated capability to provide responsive air refueling across the globe,” said Col. Derek Salmi, 92nd Air Refueling Wing commander, in a previous article. “Through hard work and dedication, our Airmen have established Fairchild (AFB) as the Air Refueling Center of Excellence and we will continue to carry forth this legacy as the world's largest tanker wing.”

The new squadron will expand Fairchild AFB's mission of global reach and enhance its lethality and capabilities as the world's largest air refueling wing

“(Fairchild AFB) will be a strategic hub for KC-135 refueling operations for decades to come,” said Maj. Gen. Sam Barrett, 18th Air Force commander, during a meeting with Fairchild AFB Airmen earlier this year. “It's extraordinary that we take these weapon systems, with our innovative Airmen and employ them all around the world with near-perfect mission execution. This base is truly the center of excellence for the KC-135.”

The squadron was deactivated in 2004. This ceremony marked the reactivation of the new squadron, however, activities for squadron members have already begun.

“We have been working very hard to set up our squadron, with a new building and new furniture, setting up our processes, (all the while) we have already received tasking's to send our Airmen downrange to support the fight,” said Lt. Col. Cindy Dawson, 97th ARS commander. “We have a lot to do to get our squadron operating like a normal day-to-day squadron, but the fight doesn't stop. We are jumping right into being part of that.”

The 97th ARS has over 70 years of history. It was previously a bomber squadron and was one of the first Air Force air refueling units in 1949.

“The tankers are one of our most strategic assets for the Air Force,” Dawson said. “We have fantastic fighters and bombers that can bring air power anywhere in the world, but they can only get there with the help of tankers.”

The squadron's new commander is eager to lead her Airmen to success.

“It is hard to describe my excitement; this is really an amazing squadron and to be part of that is remarkable,” Dawson said. “To have the opportunity to lead our Airmen into that experience, I get the opportunity to shape how we build ourselves and define our squadron.”



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