

THE AVIATION MAGAZINE

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- ▶ **Israeli Air Force over Germany**
- ▶ **Exercise BACCARAT 2020**
- ▶ **C-130 - Goodbye to a Workhorse**
- ▶ **Fighting Winter's Fire**
- ▶ **Flashback - Malta 2004**
- ▶ **And so much more ...**

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Cover: French Army Aviation NH-90 TTH *Caïman* Aduring Exercise BACCARAT, France © 2020 Martij Venix

This page: German Air Force Tornado assigned to TaktLwG 51 "I" hosting Hungarian Air Force JAS-39s during the Exercise MAGDAYS in Germany © 2020 Ralf Jahnke



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THE AVIATION MAGAZINE

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THE AVIATION MAGAZINE is published six times a year by a team of volunteers interested in aviation. We are devoted to cover a wide range of aviation events ranging from air shows, air base visits, military exercises, civilian spotting, and pilot and veteran interviews – accentuated with exceptional photography. THE AVIATION MAGAZINE is a leader in the e-magazine format since 2009, bringing exclusive and fascinating reports to our global aviation enthusiasts digitally.

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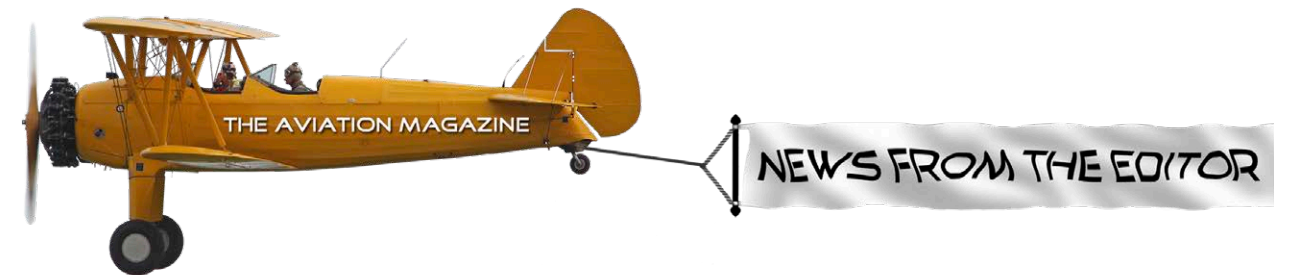
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First of all, we wish our readers all the best for 2021, be confident and above all, stay healthy and be safe. 2020 was very different from previous years, and many things will not be the same in 2021 either. There will be a new "normal"; how that will be, remains to be seen.

Nevertheless, we will continue to report on exciting events. In this issue, we feature the first ever visit of Israeli Air Force combat aircraft to Germany and their participation in the exercises Blue Wings and MAGDAYS. We also present the exercise BACCARAT in the French Alps and the end of the C-130 Hercules in the service of the Belgian Air Force and much more.

With this edition, we introduce two new sections – focusing on photos – in our magazine: **Spotted at** presents photos of military and military related aircraft movements at a specific air base within the last couple of months. **Flashback** is a photographic retrospective of events, exercises, base visits, and special events from the not-too-distant past - showing pictures of aircraft that have since been retired or that still exist, when digital photography was in its infancy and the slide film was still the standard.

For now, I wish you much pleasure in reading this new issue. Download your free copy of the 72th issue of THE AVIATION MAGAZINE [here!](https://issuu.com/theaviationmagazine)

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Ralf Peter WALTER
Publisher & Editor

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ISRAELI AIR FORCE OVER GERMANY

REPORT AND PHOTOGRAPHY BY PETER THIVESSEN UNLESS NOTED



In the past, the German Air Force has already had the opportunity to train with the Israeli Air Force in the Negev desert during the exercises "Blue Flag 2017" and "Blue Flag 2019". At the invitation of the inspector of the German Air Force, Lieutenant General Ingo Gerhartz, the "return visit" of the Israelis took place in August 2020.

August 17, 2020 is a day on which German-Israeli history was written at Nörvenich Air Base. In the early

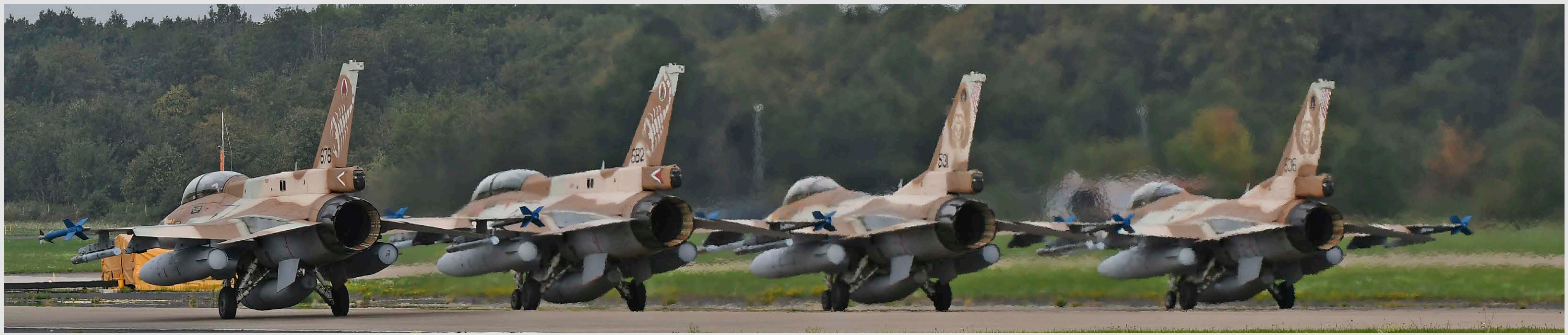
afternoon, six F-16 fighter planes of the Israeli Air Force landed there for the first time on the territory of the Federal Republic of Germany. The fighters were accompanied by a Gulfstream G550 Airborne Early Warning (AEW) with Major General Amikam Norkim, Commander of the Israeli Air Force, on board. On entering German airspace, the Israelis were met by two EF2000 Eurofighters of the Taktisches Luftwaffengeschwader 31 "Boelcke" from Nörvenich. Lieutenant General Ingo Gerhartz, piloting one of

these Eurofighters, welcomed Major General Norkim with the words: "On behalf of the German Air Force, it is an honor for me to welcome the Israeli Air Force entering German airspace for the first time in history. My Israeli Friends, Amikam, now our Blue Wings fly side by side!" Before the F-16s landed at Nörvenich, a five-ship formation consisting of two EF2000s and three F-16s flew over the air base. Approximately 180 soldiers and ten aircraft deployed Nörvenich AB for two weeks: three F-16C Barak of

101 Squadron and three F-16D Barak of 105 Squadron from Hatzor AB, two B-707 Re'em tankers of 120 Squadron based at Nevatim AB and two Gulfstream G550 Nachshon of 122 Squadron, also from Nevatim

Two Israeli Air Force F-16D Barak of 105 Squadron and a German Air Force EF2000 Eurofighter assigned to TaktLwG 31 "B" over Germany during exercise BLUE WINGS

Bundeswehr / Dr. Stefan Petersen



AB Air Base. The two G550s flew in two different configurations:

- The G550 CAEW (Conformal Airborne Early Warning) aircraft, equipped with a multi-sensor system with aerial surveillance, command, control and communications functions, is instrumental to air supremacy. Its sensor suite provides air defense and air battle management, with high-altitude long-range continuous 360° surveillance of all airborne and maritime threats.
- The G550 SIGINT (Signals Intelligence) version's mission is to search, intercept, locate, analyze,

classify, and monitor transmissions that originate from air-, land- and sea-based transmitters. This could be for example voice, tactical or written radio traffic and, in particular, electromagnetic radiation from enemy radar and fire control systems.

The exercises

During their two-week stay in Germany, the Israeli Air Force participated in two exercises. The first week included the exercise Blue Wings 2020, which was the first German-Israeli exercise on or over the territory of the Federal Republic of Germany. In the second week

they took part in the multinational NATO exercise MAGDAYS. Both exercises were more than usual a challenge for all participants. Since Israel is not a member of NATO, Israeli procedures and standards for air operations differ from those of NATO. During the two exercises, different scenarios, such as the threat from surface-to-air missiles, classic air combat and missions in large formations, were practiced on the basis of NATO combat doctrine. Tanker support as well as air-to-air surveillance (AEW) and electronic air reconnaissance (SIGINT) were provided by the Israelis. For the Israeli Air Force, the two exercises provided an excellent opportunity to further develop

its capabilities for cooperation with other nations and air forces, all the more so as these were the only two international exercises outside Israel in 2020.

Historical overflight

To commemorate the assassination during the 1972 Summer Olympics, in which Palestinian terrorists murdered eleven Israeli athletes, a German-Israeli formation flew over the Fürstenfeldbruck airbase on August 18, 2020 and then past the former Dachau concentration camp.

Israeli Air Force F-16C single-seaters of 103 Sqn and F-16D two-seaters of 105 Sqn at Nörvenich AB



■ IAF F-16D taxiing to the runway while an EF2000 takes off (inset left)
 ■ IAF F-16D and EF2000 taxiing back after returning from their mission (inset right)
 ■ IAF F-16D taking off (main image)
 All photos Bundeswehr / Jane Schmidt





Israeli Air Force Gulfstream G550 with two F-16D Barak of 105 Squadron and two German Air Force EF2000 Eurofighter assigned to TaktLwG 31 "B" enroute to Southern Germany for their historic fly-by of Fürstenfeldbruck AB and the Dachau concentration camp memorial site.

Bundeswehr / Dr. Stefan Petersen



German Air Force EF2000 *Eurofighters* assigned to TaktLwG 31 "B" on final approach after completion of their mission during Exercise Blue Wings



German Air Force EF2000 Eurofighter assigned to TaktLwG 31 "B"



- IAF KC-130H *Karnaf* assigned to 103/121 Sqn (inset left and main image)
- IAF C-130J assigned to 103 Sqn (inset right)



1



4



2



5



3

1, 2, 3 IAF KC-707 Re'em assigned to 120 Squadron
 4 IAF G550 Nachshon Eitam SIGINT assigned to 122 Sqn
 5 IAF G550 Nachshon Eitam CAEW assigned to 122 Sqn



Historic fly-by of the
Dachau concentration
camp memorial site.

Bundeswehr
Dr. Stefan Petersen



Historic fly-by of the
Fürstenfeldbruck AB

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A400M FOR LUXEMBOURG

REPORT AND PHOTOGRAPHY BY JORIS VAN BOVEN AND ALEX VAN NOIJE



On Wednesday, 7 October 2020, the Luxembourg Minister of Defense François Bausch and the new Chief of Staff General Steve Thull welcomed the new Airbus A400M transport aircraft for the Luxembourg Armed Forces at the main airport Luxembourg-Findel. The Airbus A400M military aircraft of the Luxembourg Armed Forces (serial: CT-01) arrived in Luxembourg with a delay due to technical issues. It stayed there only for a few days before flying to the Belgian air

base Melsbroek. In 2001, the Belgian and Luxembourg governments agreed to jointly procure a total of eight Airbus A400M's; one aircraft for Luxembourg and seven for Belgium. All eight aircraft will be assigned to the Belgian 15th Wing at Melsbroek Air Base. The Luxembourg Armed Forces will also provide crew members for the two-national A400M fleet. The A400M's will replace the aging Belgian Air Force C-130 *Hercules* fleet. The A400M can land and take off using

a short runway and it can even land on difficult terrain such as a beach or on a grass runway. The aircraft can be used for military as well as humanitarian purposes, according to the new Chief of Staff of the Luxembourg Armed Forces, Steve Thull: "In any case, it can fly people to Mali, which is not a problem at all, its operational range is larger than the current C-130 *Hercules*. Above all, we are able to transport much more material and many more people."

The government of Luxembourg estimates the costs for the A400M project at almost 420 million Euros over a period of 35 years. The purchase of the aircraft is estimated at almost 200 million Euros. Minister of Defense François Bausch says: "That is a lot of money, but it would be worth it, because the aircraft could be lent to other European countries and because it could also be used for civilian purposes." Defense minister Bausch said: "Then, we have the MRTT program,

Luxembourg Armed Forces' Airbus A400M just arrived at Luxembourg-Findel International Airport



which is the Multi-Role Tanker & Transport program, where we have been shopping with other European countries, where it is about sharing costs. I think at this stage, for the aviation in the military field, it is all that we need. So I would like to say that over the next few years, under my leadership in defense, hardly anything will be done in aviation anymore. I think we still have to invest in space and we should probably also invest in military vehicles."

On Thursday, 8 October, Grand Duke Henri of Luxembourg took a look at the A400M transport aircraft at Luxembourg-Findel airport. Bausch mentioned: "And if the weather allows, on Friday October 9th, the A400M will fly from Luxembourg-Findel Airport towards its new home base Melsbroek Air Base via a route over the main cities of Luxembourg and Belgium, together with its predecessor, a Belgian C-130 Hercules during a so-called 'Welcome Flight'." This A400M is operated by Belgian and Luxembourg. The Airbus A400M is the first Luxembourgian military aircraft since 1968. At that time, three Piper PA-18 Super Cups were retired from service. The Luxembourg Armed Forces also received two Eurocopter H145 helicopters in 2019. Luxembourg participates with a number of flight hours in the A330 MRTT tanker project, allowing this project to obtain a ninth aircraft recently on the costs



of the country. For a small country like Luxembourg, this is an impressive achievement and the arrival of the A400M was a historical event for the aviation in Luxembourg.

A "wet welcome" by the local fire department (above) and the A400M crew in front of their aircraft (left)



BACCARAT 2020

REPORT AND PHOTOGRAPHY
BY MARTIJN VENIX AND
DENNIS VAN DER WIEL



From 14 to 25 September, the annual French Army's exercise BACCARAT took place for the fourth time and in the French Alps for the first time. This major air-land combat training exercise in open terrain was conducted in an area of 150 by 250 kilometers. It was divided into three zones (north, middle, and south) between the cities Valence, Grenoble, Briançon, and Gap. The area also included a live-fire zone at the Mailly / Sissonne army camps. In cooperation/

partnering with the 27th Mountain Infantry Brigade (27th MIB), the exercise was created to maintain and improve the air assault capabilities of the 4th Airmobile Brigade (4th AAB), and to train for high-intensity combat in mountainous environments. More than 1,200 troops, 27 units, and a total of over 30 helicopters, including a detachment of the British 4th Army Air Corps regiment with two WAH-64 *Apaches* (three were planned), and an Australian observer

participated in BACCARAT 2020.

Units conducted missions in depth to engage primary and secondary targets with all air and ground forces, including allied units. The presence of a substantial opposing force added realism to the exercise. It was an opportunity to review the 5th Combat Helicopter Regiment (5th CHR) command post and to train the entire chain of command with its communication tools in a digital format.

PARTICIPANTS

- 1st Combat Helicopter Regiment (1st CHR) based at Quartier La Horie, Phalsbourg deployed *Gazelles*, NH90-TTH *Caïmans* and *Tigres* to the military camp of Chambaran for the exercise.
- 3rd Combat Helicopter Regiment (3rd CHR) from at Étain-Rouvres participated with seven *Gazelles* out of the Aérodrome de Valence-Chabeuil. The regiment's nickname is "Regiment of the Night", as

Two NH90-TTH *Caïmans* assigned to 5th RHC returning to base from a mission in the French Alps



▲ AS342M *Gazelle* assigned to 5th RHC
▼ NH90-TTH *Caiman* assigned to 5th RHC



EC665 *Tigre* AHD assigned to 5th RHC
NH90-TTH *Caiman* and AS532UL *Cougar* of the 1st RHC ▼



- it established itself as a specialist in night combat.
- 5th Combat Helicopter Regiment, based at Quartier de Rose, Pau, participated with its *Gazelles*, NH90- TTH *Caïmans*, *Cougars* and *Tigres* from the Aérodrome de Grenoble-Le Versoud.
- The British 4th Army Air Corps' two WAH-64 *Apaches* were hosted by the 3rd CHR.

The big absent from this year's BACCARAT was undoubtedly the FAMET (Fuerza Aeromóviles del Ejército de Tierra), the Spanish Army Airmobile Force. Following the measures taken in the face of the COVID-19 pandemic, they – for the first time – did not participate in the exercise. This partnership had even intensified last year since it was a Spanish officer who commanded the multinational helicopter battalion (BMNH) during BACCARAT 2019.

In previous editions, the Spanish FAMET participated with CH-47 *Chinook*, *Tiger*, and NH90-TTH *Caïman* helicopters.

Over the years, BACCARAT has become an essential event in the combat readiness of army units and plays a key role in keeping these units at their highest level of qualification.

WARFARE AND TERRORISTS IN THE ALPS

With an exercise area in the French Alps, BACCARAT 2020 gave the participants the possibility to improve intervention methods in mountainous environments while familiarizing themselves with the latest generation digital equipment, particularly, in terms of communication and command.

BACCARAT 2020 was split into two phases: The first, from 14 to 18 September, was devoted to setting up the various command posts of the combined arms tactical groups (PC GTIA), technical and reconnaissance flights in the mountains, and live-fire at the ranges of Suippes and Canjuers. The second phase, called Tactical Phase or LIVEX (Live Exercise), took place from 19 to 24 September. This dynamic phase made it possible to carry out actions at depth by combining air and land forces. During this period, the helicopter operations were therefore numerous, ranging from commando infiltration/exfiltration to ambush via vertical assault, seizure of passes, and also tracking down terrorism suspects in built-up areas (a campsite at Les Vigneux). A landing zone was established, which was used by three NH90-TTH *Caïmans*, to pick up troops of the 27th Mountain Infantry Brigade. To make sure that the exercise is very close to reality, a realistic and challenging scenario was set up in a demanding mountain environment. Well-equipped soldiers who were able to conduct intense, symmetric combat acted as opponents. In other words, in this scenario, the friendly forces, made up of the 4th BAC

and its allies, had to face an opposing force that was equivalent to them in terms of preparation, armament, and determination. To make it even more realistic, the results of the various daily actions played a decisive role in the evolution of the scenario throughout the exercise.

EXERCISE BACCARAT AND COVID-19

In terms of health, wearing a mask was compulsory in vehicles and command areas (inside buildings and tents). Participants had to complete a health check before the exercise and medical units were part of the exercise to prevent overload of the local health

systems. The regiments spread over three airfields, as mentioned previously: Chambaran, Valence-Chabeuil and Grenoble-Le Versoud and headquarters were at Varcès, a fourth location.



Final check of a British Army WAH-64 Apache before departing for the next mission



The British Army deployed two WAH-64 *Apaches* to the A  rodrome de Valence-Chabeuil



▲▼ NH90-TTH *Caiman* of the 1st RHC and soldiers rappelling down from the helicopter



A crew member of this 5th RHC's *Caiman* checks whether the spot is safe to land ▲▼







An AS532UL *Cougar* of the 1st RCH approaches the landing zone (top left) and deploys a team of mountain soldiers (top right). Right after leaving the landing zone (bottom left) the *Cougar* is joined by an NH90-TTH *Caiman* of the 5th RCH (bottom right).





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EC665 *Tigre* HAD, assigned to the 5th RHC. Mounted on the helicopter's right stub wing's inner hardpoint is a rocket launcher system that holds up to four Hellfire anti-tank missiles. A 22-tube



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launcher for 68 mm unguided air-to-ground rockets is attached to the left stub wing's inner hardpoint. The nose mounted 30 mm turreted gun is capable of firing 750 rounds per minute.



▲ AS342M *Gazelle* of the 5th RHC. It can be armed with four wire-guided anti-tank HOT missiles utilizing the SFIM APX M397 gyro-stabilized CCD/IR sight system.



▲ AS342M *Gazelle* assigned to the 3rd RHC.
▼ AS555UN *Fennec* of the École d'Application l'ALAT.



AS342M *Gazelle* assigned to the 1st RHC in a "clean" configuration.



MAGDAYS

REPORT RALF PETER WALTER
PHOTOS RALF JAHNKE UNLESS NOTED



The Framework Nations Concept (FNC) was created in 2014 within NATO to enhance the cooperation, the interoperability of forces, the establishment of multinational formations, the operational output, and, where possible, to set the condition for a potential collaborative capabilities development.

Based on the (FNC), Germany took over the responsibility for establishing a Multinational Air Group (MAG) to support the setup of "large formations" within the Allied Air Forces. The aim is to achieve limited operational capability by 2023 and full operational capability by 2026. To provide NATO with well-trained, operational, and especially interoperable airborne assets, up to four "MAGDAYS" with international participation are planned annually.

However, due to the COVID-19 pandemic, the first two planned MAGDAYS in 2020 were canceled. Each MAGDAYS event consists of two days for preparation and two days for flying.

The second MAGDAYS in 2020 took place from 25 to 28 August 2020 and was hosted by Germany. Participants

were Germany with six Tornados of the TaktLwG 33 at Büchel AB and the TaktLwG 31 "B" with EF2000 Eurofighters at Nörvenich AB, Hungary with five JAS39 Gripen operating out of Jagel AB in Northern Germany, and Israel with six F-16s flying from Nörvenich AB. The focus of this exercise was to establish and maintain air

superiority by the suppression of enemy air defenses (SEAD) and counterair operations.

One of three Israeli Air Force F-16D *Barak*'s of 105 Squadron which deployed together with three F-16C *Barak*'s of 101 Squadron to Nörvenich Air Base. This was the first time ever that Israeli Air Force fighter jets were in Germany. They stayed for two weeks at Nörvenich AB and took part in the BLUE WINGS 2020 and MAGDAYS exercises.



▲ Israeli Air Force F-16D Barak of 105 Sqn ▲
▼ Israeli Air Force F-16D Barak of 101 Sqn ▼





DEFINITIONS

AIR SUPERIORITY

That degree of control of the air by one force that permits the conduct of its operations at a given time and place without prohibitive interference from air and missile threats.

SUPPRESSION OF ENEMY AIR DEFENSES

Activity that neutralizes, destroys, or temporarily degrades surface-based enemy air defenses by destructive and/or disruptive means.

COUNTERAIR

A mission at the theater level that integrates offensive and defensive operations to attain and maintain a desired degree of control of the air and protection by neutralizing or destroying enemy aircraft and missiles, both before and after launch.

Source: DOD Dictionary, November 2019



German Air Force IDS Tornados of the Taktisches Luftwaffengeschwader 33 at Büchel AB taking-off to the exercise aera over the North Sea
Photos: Bundeswehr / Nico Tennhardt



Hungarian Air Force JAS39 Gripen
assigned to 59th Tactical Fighter Wing

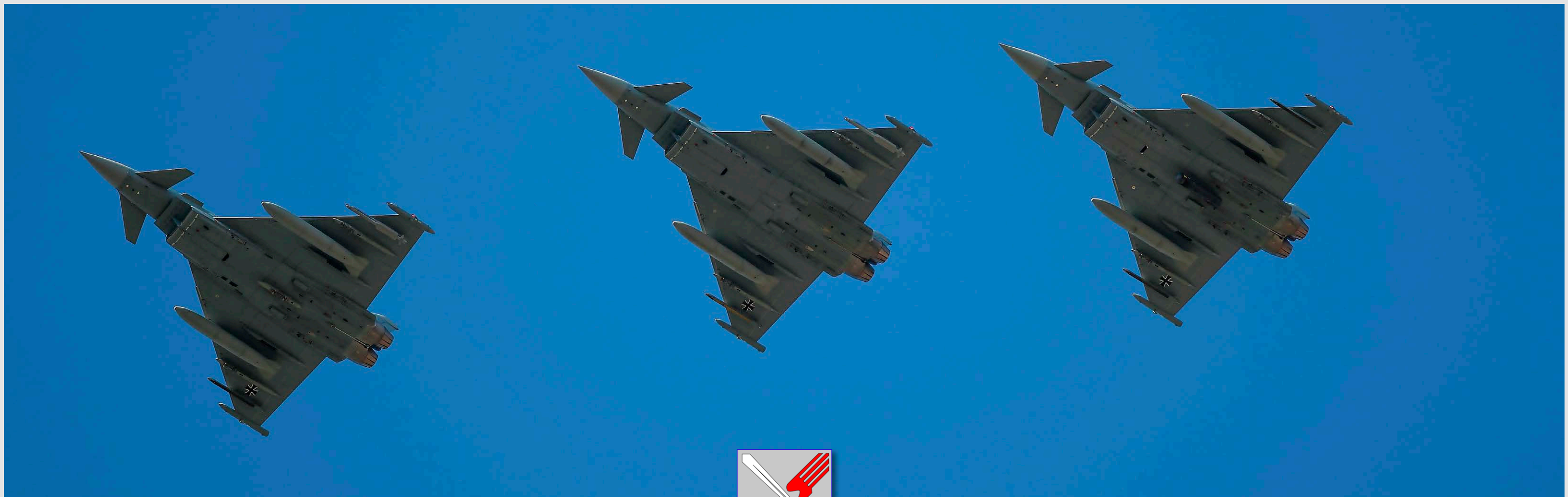


Five JAS39 *Gripen* assigned to the 59th Tactical Fighter Wing of the Hungarian Air Force deployed to the German air base Jagel in Northern Germany to participate in this year's second MAGDAYS exercise





This German Air Force EF2000 *Eurofighter*, assigned to Taktisches Luftwaffengeschader 31 "Boelcke" at Nörvenich AB, is taxiing to the runway



German Air Force EF2000 *Eurofighter* assigned to Taktisches Luftwaffengeschader 31 "Boelcke"

GOODBYE TO A WORKHORSE

REPORT AND IMAGES BY KRIS CHRISTIAENS AND GERT TRACHEZ





As in many other countries and air forces, the Lockheed C-130 *Hercules* has been the workhorse within the Belgian Air Force for many years. This military transport aircraft has proven its value several times during numerous military missions and humanitarian deployments and was an essential part of military logistics and tactical transport within the Belgian armed forces. The Belgian Air Force ordered twelve Lockheed C-130 *Hercules* aircraft in 1970 to replace the Fairchild C-119 Flying Boxcar who had been in service since 1952. The first C-130 for the Belgian Air Force was delivered in 1972 and became part of the 15th Air Transport Wing at Melsbroek Air Base (EBMB). Within the 15th Air Transport Wing the C-130s are part of the 20th Squadron. During the first years of their operation, the C-130s of the Belgian Air Force wore a 'Vietnam' camouflage scheme which was later replaced by an overall grey color scheme. All twelve C-130s of the Belgian Air Force were numbered CH-01 to CH-12. Over the years, all C-130s received various updates and modifications, whereby the aircraft were provided with updated wings, a digital cockpit and a self-protection system. These updates and modifications increased their lifespan until 2020. Thanks to the four powerful Rolls Royce/Allison

engines, these C-130s can perform Short Take Off & Landing (STOL) maneuvers in areas with little or poorly prepared terrain. This is why the Belgian Air Force often used the C-130s in challenging conditions during military exercises, humanitarian missions or non-combat evacuation operations (NEO).

Humanitarian aid and emergency evacuations

The main task of the 20th Squadron and its C-130 transport aircraft is tactical air transport. An important part is transportation of troops and dropping of para-commandos where their intervention is required. The relationship between para-commandos of the Belgian Army and these aircraft has always been very close. In recent decades, the special collaboration has been successfully demonstrated during various emergency evacuations from Central Africa. The second most important task of the 20th Squadron is to support humanitarian missions. Thanks to the support of many humanitarian missions in Africa, the 15th Wing of the Belgian Air Force built a strong worldwide reputation. For example, the Belgian C-130s were deployed for humanitarian missions in Niger, Chad, Burkina Faso and Mali following the Sahel droughts. Other humanitarian aid missions were carried out in Sudan, Ethiopia and

Somalia. During these missions, the C-130s were responsible for, among other things, dropping food packages and the transport of medication and people. In 2014, a Belgian Air Force C-130 also delivered 13 tons of relief supplies to victims of the Islamic State terror group in the north of Iraq. Also, when Belgian Air Force F-16 fighter jets were deployed in the Middle-East or Afghanistan, the C-130s of the 20th Squadron played an important role as they were used for the transport of material and essential components.

CH-06: Fatal bird strike

Unfortunately, the 20th squadron of the 15th Air Transport Wing also suffered a major setback in 1996. On 15 July 1996, one of its Lockheed C-130 *Hercules* (CH-06) crashed at Eindhoven Air Base in The Netherlands. The accident happened during landing in almost ideal weather conditions. The cause of the accident was a collision of birds with the two left engines, which caused the plane to go out of control during landing. The aircraft hit the ground, spun on its axis and ended up in the grass next to the runway. Even before it stopped, a fire started that destroyed a large part of the aircraft. On board were 37 passengers and four crew members. Almost all passengers were members of the Dutch Royal Army Brass Band who had given several performances in Italy. The crash

resulted in 34 fatalities and seven seriously injured. This was the first and only crash involving a C-130 aircraft of the Belgian Air Force.

CH-02: Fire

Another major setback for the 20th Squadron took place in Belgium itself. Shortly after midnight, 5 May 2006, a fire started in hangar 40 of the aeronautical maintenance company Sabena Technics at Brussels International Airport. The fire brigade had the fire under control by 03:00 but could not prevent the hangar's roof from collapsing. It took at least 24 hours to completely extinguish the fire. At the time of the fire, four aircraft were inside hangar 40: a Volare A320, an Armavia A320, an Armenian International Airways A320 and a Lockheed C-130 *Hercules* (CH-02) of the Belgian Air Force. All four aircraft were severely damaged beyond repair. Six people were also injured by the fire, including four firefighters.

CH-13: former Hurricane Hunter

On 11 January 2007, a final replacement agreement was signed by the Belgian Air Force and Sabena Technics to replace the Lockheed C-130 *Hercules* CH-02 that was destroyed during the fire at hangar 40 with a second-hand C-130, similar to the other C-130's of the 15th Air Transport Wing. Sabena



First C-130H of the Belgian Air Force delivered in 1972 (left) and C-130H 'CH-07' with special markings on the occasion of the 60th anniversary of the 15th Wing (right)



Technics acquired a former Lockheed C-130E of the USAF, at that time owned by the American civil airline Evergreen Aviation. Built in 1965, this C-130 aircraft was converted into a weather reconnaissance aircraft and operated from Guam (Andersen Air Force Base) in the Pacific Ocean and from Keesler Air Force Base in Mississippi. This C-130 was used by the 53rd Weather Reconnaissance Squadron, nicknamed *Hurricane Hunters*, which the U.S. Air Force used to fly into hurricanes, cyclones and other tropical storms for the specific purpose of directly measuring weather data in and around these storms. In July 1993, this C-130 was withdrawn from service and was stored at the famous desert boneyard at Davis-Monthan Air Base in Arizona. Eventually the C-130 was bought in 1999

by the American airline company Evergreen Aviation which used it as a transport aircraft for a short period of time. The aircraft ended up in a museum where it was on standby for a possible buyer. In the evening of 8 April 2007, the Lockheed C-130 *Hercules* 'N130EV' finally arrived at Melsbroek Air Base. After its arrival in Belgium, 'N130EV' was converted for 20 months to bring this aircraft up to the same standards of the already modernized fleet of C-130s of the Belgian Air Force.

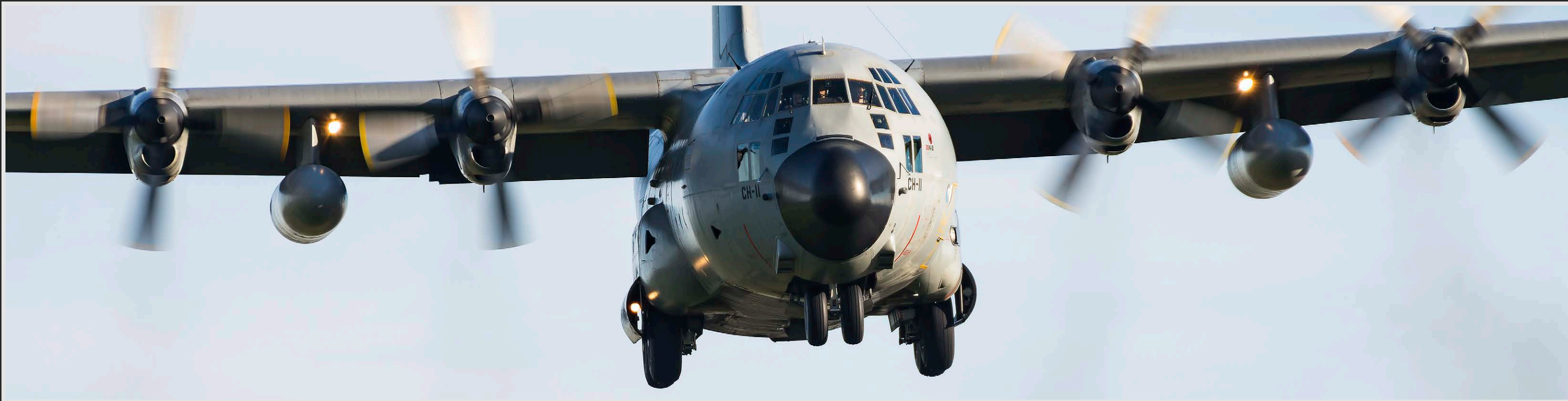
CH-11: A red nose for charity

On Friday, 2 December 2016, a remarkable event took place at Melsbroek Air Base in Belgium. A Lockheed

C-130 *Hercules* military transport aircraft of the Belgian Air Force, painted with a red nose and some special stickers was shown to the public and people of the media. This unique project was developed by the department Image and Public Relations (IPR) of the Belgian Air Component in support of the Red Nose Day. For the second year in a row the Flemish television channel VTM, the radio station Q-music and the Belfius Bank organized on 3 December 2016, the event 'Red Nose Day'. This charity event was created to raise money for better care for young people with mental health problems. As the symbol of the Red Nose Day is a little red nose that anyone can buy, the Belgian Air Component came up with the idea to paint a C-130 *Hercules* with a special red nose. The

C-130 which was selected for this unique project was the CH-11. Besides a red nose, the C-130 *Hercules* was also equipped with some special stickers showing the faces of the logos of the Red Nose Day. Because the Belgian Air Force wanted to do something extra, 25 young people with mental health problems were offered a flight on a C-130 *Hercules* so that they could forget their worries for a while. During the flight, which lasted about half an hour, at a height of almost three kilometers the load masters also opened the cargo door of the C-130 *Hercules* so the passengers had an unforgettable view of the clouds and the Belgian countryside beneath them. The Belgian Air Force supported the Red Nose Day also financially by auctioning a unique photo. The winner of the highest

The C-130 'CH-07' is ready for another mission at night



bid was offered two seats on board the C-130 *Hercules*.

Beginning of the end

After almost 45 years of service, the first C-130 of the Belgian Air Force (CH-08) was officially taken out of service on 27 December 2017. At that time the CH-08 had more than 22,200 flight hours on its counter. The aircraft was transferred to Beauvechain Air Base where components of CH-08 served as spare parts for the operational C-130's of the 20th Squadron. A second C-130 of the Belgian Air Force (CH-03) was taken out of service in October 2019. In May 2019, a large-scale deployment of the Belgian C-130s in an

international context also came to an end. Since May 2018, a C-130 has been constantly in Mali to support the United Nations operation MINUSMA. The core tasks of the Belgian Tactical Air Detachment (BELTAD) were to transport personnel and equipment, to provide air supplies over hostile territory and to carry out medical evacuations. When the Norwegian Air Force took over these tasks from Belgium in May 2019, the long-term, large-scaled deployments of the Belgian C-130s and its crews came to an end. In 2019 and 2020 more C-130 aircraft of the Belgian Air Force were retired prior to the transition to their successor, the Airbus A400M *Atlas*.

Airbus A400M: a worthy replacement

In December 2001 it was decided that the European Airbus A400M *Atlas* will replace the C-130s of the Belgian Air Force. Belgium bought seven A400M's. The Airbus A400M *Atlas* is a European four-engine turboprop military transport aircraft designed by Airbus Defence and Space as a tactical airlifter with strategic capabilities to replace older transport aircraft, such as the Transall C-160 and the Lockheed C-130 *Hercules*. The A400M is in between the C-130 and the Boeing C-17 in size, it can carry heavier loads than the C-130 and is able to use rough landing strips. An eighth A400M

was purchased by Luxembourg and will be stationed at Melsbroek Air Base in Belgium. This aircraft, which will fly with a Belgian registration, is part of a joint fleet operated by the 'Belgium-Luxembourg Binational Air Transport Unit A400M' (BNU A400M) in which Belgians and Luxembourgers will work side by side. Since Belgium was involved in the A400M program from the start, the Belgian industry also managed to play an important part in the development and production of the A400M. For example, the Belgian aerospace company SABCA supplies the mechanisms of the wing flaps and the composite lining of those flaps. Because the Airbus A400M is much larger than its predecessor,

above left: To support the Red Nose Day charity event one of the C-130H had a red nose and some red stickers

above middle: To commemorate the 75th D-Day anniversary this C-130 was painted with "invasion stripes"

above right: Cockpit of a Belgian Air Force C-130H



construction of a new modern hangar already started at Melsbroek Air Base. This new hangar has a length of 183m, a depth of 75m and a height of 30m. After the first A400M with Belgian registration rolled out of its hangar in Seville, Spain and passed some crucial tests, the Airbus A400M 'CT01' arrived at Melsbroek Air Base in Belgium on 9 October 2020. Especially for this occasion, the Airbus A400M 'CT01' made a fly-past over Belgium and Luxemburg at low altitude and was accompanied by some F-16s of the Belgian Air

Force. Now that the first Airbus A400M has arrived at the Melsbroek Air Base, the Belgian Air Force can start a new chapter in its rich history of tactical air transport.

Arrival of the first Airbus A400M at Melsbroek AB (main image)
Preflight check of a C-130H at Melsbroek AB (inset)





C-130H with a special paint scheme on the occasion of the 70th anniversary of the 15th Wing



SPOTTED AT HOHN AB

PHOTO-REPORT BY RALF JAHNKE



Hohn Air Base is a military air base of the German Air Force. Its ICAO-Code is ETNH and it is located in Northern Germany (54° 18' 49" N, 9° 32' 17" O). Hohn AB is home to the Lufttransportgeschwader 63 (LTG 63 – Air Transport Wing 63) operating the C-160 Transall. Currently, the German Air Force is in the process of transitioning from the Transall to the A400M. As of today, the Transall will be phased out by

the end of 2021. Also based at Hohn AB is the GFD GmbH (Gesellschaft für Flugziieldarstellung), being part of the AIRBUS company. GFD has 14 Learjet 35A's/36A's and provides highly specialized tasks such as electronic warfare training, aerial target simulation with or without towed targets, fighter control training, and Red Air presentation for air forces all over the world.

C-160D *Transall* with special color scheme to celebrate 400.000 flight hours of the Transall with the Lufttransportgeschwader 63





C-160D Transall





Airbus A319-133 assigned to FIBschftBMVg
(Flugbereitschaft des Bundesministeriums
der Verteidigung)



FIGHTING WINTER'S FIRE

REPORT AND PHOTOGRAPHY
BY DAVID MAZÓN GÓMEZ
UNLESS NOTED



The north of Spain and more specifically, the Autonomous Community of Cantabria, has great peculiarity in the fight against forest fires; most of them occur in winter, a circumstance that can only be explained because they are caused by pyromaniacs taking advantage of the southerly winds which, being drier, gustier and warmer than the rest of the prevailing winds, facilitate the expansion of the fire. In fact, in 1941, most of the old City of Santander burned to the ground when a strong southeast wind hit the city. A small spark evolved in a fire that destroyed the home of nearly 10,000 people. There were gusts of up to 180 kilometers per hour.

In February 2019, more than 300 fires were caused

in such a way that on 17 February, the Government of Cantabria was forced to activate the Special Plan for Forest Fires of the Autonomous Community of Cantabria (INFOCANT). They requested the support of the Military Emergency Unit (UME) because of the situation resulting from the large number of fires. The nearly 700 men and women fighting the fire at that time were joined by 43 Grupo de Fuerzas Aéreas with captains Reinaldo Fernández Boyero and Miguel Maroto. Operating with their co-pilots and flight mechanics, they commanded two Canadair amphibians to support the extinction of the fires from the air.

In response to the question why Captain Miguel Maroto decided to become a Captain, he says: "I have a military tradition in my family. My father was



a helicopter pilot of the Spanish Army and in a way, I have it in my blood. Since I can remember, I have wanted to be a pilot and after finishing high school, I prepared myself and entered into the General Academy of the Air (AGA). At the end of the race, after having specialized as a transport pilot, I was able to choose among several destinations, and the most attractive to me was to be pilot of the firefighters in the 43 Grupo de Fuerzas Aéreas and since 2006, I dedicate myself to this."

He continues: "The training process includes a series

of theoretical lectures to familiarize yourself with the aircraft, after which various examinations are carried out to check your knowledge of the aircraft. Once the theoretical process has finished, the flights begin with an instructor to end up being LCR (Limited combat ready) or co-pilot. In the process, we also rely on a simulator/trainer that we have at the Torrejón Air Base. Over the years, more training plans are completed to become aircraft commander, pilot-in-

The CL-215 requires 1,340 m (4,400 ft) of flyable length to descend from 15 m (49 ft) altitude, scoop 6,137 l (1,621 US gal) of water during a twelve-second 410 m-long (1,350 ft) run on the water at 70 knots (130 km/h), then climb back to 15 m (49 ft) altitude. The aircraft can also pick up partial loads in smaller areas, and can turn while scooping if necessary.



View on the Santander city coastline from the cockpit of the CL-215T

The amphibians used Santander Bay to refill the water tanks; it offered a better surface for the refills than the open sea but at the same time the amphibians had to make a steep dive in front of the city hills.

command on logistical, firefighting missions, and ultimately instructor pilot and flight testing." And he remembers the first time he flew the Canadair: "When you fly it for the first time, you have a strange feeling because in flight, it resembles other aircraft I have flown previously, but when it comes to taking-in water, it is totally different. It is the only one that can do it, and the feeling of floating in the water is totally different from what you've done before. Basically, it's a ship with wings."

The Canadair/Bombardier may seem a big and cumbersome aircraft, but quite contrary, it was designed to be very maneuverable at low altitude and speed, as Captain Boyero emphasizes: "The Canadair is made to load six tons of water. The thick wing profile gives it a lot of lift. The plane responds, you can fly it with a 90-degree roll angle, and even more." This is possible because "the surfaces of this plane are very large and the vertical stabilizer compared to the rest of them is enormous."

In a flight environment as hostile as it is in which the aircraft of the 43 Grupo de Fuerzas Aéreas operate, an especially delicate maneuver is loading water over the sea or a lake:

Capt Boyero explains: "A wingtip floater can touch the sea and that can be very harmful to the plane. You must also try to enter aligned so as not to turn the plane with respect to the load axis, since if it is not aligned a gust of wind can damage the keel, loading doors or rubber bands for sealing"

Both pilots express the importance of having an 'aerial media coordinator' in a firefight: "The 'aerial media coordinator' is the best thing that can happen to you when you are going to fight a fire; the accompanying crews are the pilot and co-pilot, and a thermal camera operator, so they can see where the fires are hotter and can start sending reinforcements to that point", Capt Boyero states. Another key factor is the 'extinction director' who works from the ground and is responsible for the extinction of each fire.

Talking about their best experience while flying with the CL-215/CL-415, Capt Boyero remembers vividly: "The first instructional flight with this plane in which you touch the water is something unforgettable", while Capt. Maroto feels that "seeing that you contribute actively and that your work is reflected immediately in the fight against fire, encourages you to give your best." Capt. Maroto continues: "The best experience may have been participating in the Andratx (Mallorca) fires in 2013 or the past ones in Gran Canaria in 2019.

They were very large and virulent fires, lasting several days in which the workload was very high, several days in a row, flying nine hours a day, is very tiring, but the satisfaction at the end of the mission is very great."

In 2018, the 43 Grupo de Fuerzas Aéreas joined RescUE. "Being part of the RescEU program will facilitate cooperation in the field of firefighting at a European level, making it faster and more effective. Since having integrated two aircraft in this program, when a member country requires them, you participate automatically", Capt.Maroto explains. 2021 will be the 43 Grupo's 25 anniversary.

The author and the Aviation Magazine wish to thank Captain Reinaldo Fernández Boyero and Captain Miguel Maroto for making this report possible.



▲ CL-215T(ex CL-215, converted in T in 1996) on the approach to refill the tanks

This CL-215T is scooping over the surface of the sea to press water into its tanks ▼





Approach to the fire



"Regarding the approach to the fire, once you bring water into the tanks, the first task is to link to the extinguishing coordination frequency to announce your arrival. The most common circumstance is that there is a coordination aircraft with an 'aerial media coordinator' (CMA) on board and it is this person who answers you. This call, apart from informing the rest of the air traffic of your engagement, serves to provide an initial overview of the works that are being undertaken and of the other aircraft or helicopters in the area – being a heavy medium of the Ministerio para la Transición Ecológica, it is normal that when arriving at the work area, there are always other aerial means. Once our presence has been announced, the next step is to obtain instructions from the CMA, who will assign us a discharge zone, in conjunction with the 'director of extinction' to coordinate our attack with the work of the fire department. Often, apart from the discharge zone allocation, other information is transmitted such as the presence of power lines, antennas, or birds in the area. With all this information and with the clear zone, we need the authorization to proceed with the water drop. Before this, the crew must be clear about the

objective, the direction of the wind to correct the drift of water or foam in the event that foam is used, the escape route in the event of engine failure, as well as possible obstacles that hinder the departure, personnel on the ground and, of course, the path to avoid flying into areas of smoke. The crew must make a situational assessment of a changing environment, in which adaptability is very important. The water drop is the phase of the flight of an airtanker that requires the most attention. In our case, the pilot who flies gives the control of the throttle to the pilot who does not fly. In this way the focus on the drop is increased. In general, the drop is made about 100 feet (30 meters) above ground and can be varied depending on the environment. After the release of the water, we proceed with the outgoing traffic, trying to leave the area in the fastest way and by the safest route to our water loading point. If the loading point is close, the unloading carousels can be shortened to about 5 minutes between drops, which makes our work very effective. Another factor that enhances the effectiveness of the attack is the number of aircraft on the carousel, which allows overlapping water discharges along a front, or attacking the same point with several discharges in a matter of seconds."

Capitán Reinaldo Fernández Boyero



On 8 August 2020, a CL-215 firefighting airplane crashed into an uninhabited mountainous area after a water loading maneuver during a firefighting operation in the Parque Nacional da Peneda-Gerês on the Portuguese/Spanish border. Both crew members – the Portuguese pilot and the Spanish co-pilot – died in the accident. We would like to dedicate this article to them and all the women and men who risk their health and life when fighting fires.



SCOOPING SITE REQUIREMENTS

The water source (or pickup lake) should be a minimum of one mile long , ¼ mile wide, free of obstructions, and at least six feet deep. The scooping path does not have to be straight, as the aircraft are somewhat maneuverable while scooping. Factors such as wind, elevation, and surrounding terrain will have a bearing on water source suitability. Less than a full load can be scooped on slightly smaller lakes. Both aircraft scoop at 80 kts, are on the water for about 15 seconds, and cover a distance of about 2,000 ft.

Source: National Wildfire Coordinating Group - PMS 505 / NFES 2544

TACTICAL CONSIDERATIONS

- **Tank Configuration** – The CL-215 has two compartments totaling 1,400 gallons, and the CL-415 has four compartments totaling 1,600 gallons. Loads can be dropped salvo, in trail, or split into separate drops. A salvo load for both airtankers is about 280 ft long and 65 ft wide. A trail drop is about 400 ft x 40 ft.
- **Drop Height** – Drop height ranges from 100 ft to 150 ft, depending on factors such as foam vs. straight water and direction of run (into wind vs. downwind).
- **Clearance** – When dropping near ground crews, personnel must be moved at least 200 ft to the side. When drops are made 1000 ft or more in advance of crews, no clearance is necessary except to confirm no one is on the line.

Source: National Wildfire Coordinating Group - PMS 505 / NFES 2544

FLIGHT PATTERNS AND TURNAROUND TIMES

- **Typical Flight Pattern** – The typical flight pattern (or circuit) is oval, with a pickup into the wind and a downwind drop on the fire. This is the most common and efficient circuit and preferred by most pilots.
- **Turnaround Times** – When water sources are located next to the fire, a 90 second turnaround time is possible.
 - **CL-215** – A rule of thumb for turnaround times for the CL-215 in an oval circuit is: turnaround time equals miles from lake to fire plus two minutes scooping (ex. 5 miles to the fire from the lake is a 7 minute turn).
 - **CL-415** – Typical turnaround times for the CL-415 are: 1 mile - 3 minutes, 3 miles - 4 minutes, 6 miles - 6 minutes, 10 miles - 9 minutes, and 15 miles - 12 minutes.

Source: National Wildfire Coordinating Group - PMS 505 / NFES 2544

ADDITIONAL RESSOURCES



◀ Cougar Mk1 (HU 27) of the Unidad Militar de Emergencias

Kamov Ka-32A of the Ministerio de Agricultura, Pesca y Alimentación ▶



SZOLNOK HELICOPTER BASE

REPORT AND PHOTOGRAPHY BY ISTVÁN KELECSÉNYI



Past, present, and future of the Hungarian Armed Forces, Air Force Helicopter Branch

Despite the COVID-19 epidemic, life at the 86th Szolnok helicopter base of the Hungarian Armed Forces is not interrupted. In addition to strict adherence to epidemiological rules, a media day was organized to show the present and future of the Hungarian Helicopter branch. The media day began with the presentation of Brigadier General Dr. József Koller, base commander, which continued after the description of the 80-year history of Szolnok Airport with the presentation of the current organizational structure, tasks, technology, and service facilities.

The construction of the Szolnok airport as a training center began in 1939, but in 1940, the I / 1 Fighter Flight Squadron was also established here. In 1943, the Germans took over the operation of the airport. There are also two hangars from this age, which, when modernized, also meet the requirements of the present. After the Germans, the Soviets took over the airport, and the 7th Soviet Air Force Division settled in Szolnok. In 1949, the Kilián György Aviation Officers' School started operating in Szolnok. In 1971, the airport also became the home of the Team Reconnaissance Squadron. In 1984, the MN 89th Mixed Transport Regiment was established at the base, and from 2004, the 86th Szolnok Helicopter Regiment

of the MH 89 Szolnok and MH 87th Bakony Combat Helicopter Regiments was established as the only helicopter unit. In 2005, the barracks were named after Lieutenant József Kiss of Ittebei, the Hungarian fighter ace of the First World War. Since 2007, instead of the regiment, they have performed their duties as a brigade organization as the 86th Szolnok Helicopter Base of the Hungarian Armed Forces.

Among the National Tasks, the base also provides various standby services. The National Air Defense Preparedness Service will be initiated by the base based on a separate order but will be provided by the Air Transport Standby Phase and the Airborne Radiation Reconnaissance Service at all times. The Air Search

and Rescue Standby Service and the "Common Will" Border Guard Standby Service will also be provided permanently.

Currently, these services are provided by older helicopter models of the base, the Mi-8T and Mi-17 medium carrier, and the Mi-24V and P combat and AS-350B light helicopters. The Mi-24 is the only rotorcraft with an airborne radiation detection capability by using a Hungarian-developed radiation detection container. National Tasks include cooperation with ground teams and support for training. In addition to military tasks, the base also has disaster relief tasks, such as flood protection and cooperation with firefighters. In addition to the flood protection and rescue missions

Line-up of seven Airbus Helicopters H145M



Mil Mi24P Hind



on the Danube and Tisza, helicopters saved the lives of dozens of people in the 2010 Kolontár mud disaster. The present has followed the future as H145M light and H225M medium helicopters procured from Airbus Helicopters will be replaced by helicopters procured from the Soviet Union and overhauled and minimally modernized in Russia under the Force Development Program. Hungary ordered twenty H145M helicopters in the following configurations:

- ten LUH (Light Utility Helicopter) designed to transport soldiers, light freight and for MEDEVAC (medical evacuation – evacuation of wounded from the battlefield)
- five SAR (Search and Rescue) versions, equipped with a high-performance winch system

- five MP (Multi Purpose). These helicopters are multi-purpose and can be armed with the HForce weapon system.

So far, eleven helicopters have arrived in Hungary in a mixed configuration. Two of them serve the training of Hungarian helicopter designers at the manufacturer in Donauwörth. The training for the light helicopters has already been completed by nearly 100 maintenance personnel and helicopter pilots. Before participating in the media day, they accumulated a flight time of 1,288 hours and 3 minutes and 3,937 take-offs. The H225M *Caracal* is also a multi-purpose helicopter. In addition to troops and cargo-carrying capabilities and Combat Search and Rescue (CSAR) missions, they also have fire support capabilities. Hungary has

ordered 16 *Caracals*, of which the first will be delivered at the beginning of 2023.

Szolnok not only is a helicopter base, also rigid-wing pilot training is conducted there. Future pilots are currently being selected and trained for basic flight training through NATO Flying Training in Canada (NTFC). It used to be done with the Romanian-made Jak-52M, and now with Czech made Zlin 242L and L143LSi aircraft. However, NTFC is a relatively expensive form of training and many pilots need to be trained for Airbus helicopters.

Helicopters also require infrastructure. Until the permanent hangar complex is completed, temporary but high-quality Italian air-conditioned tent hangars have been installed.

Highlight of the media day was the flying display of the H145M, Mi-24P, AS350B and Zlin 242L. Unfortunately, neither the Mi-17 nor the Mi-8T participated in the event. All of the few remaining Mi-8T and three of the last five Mi-17s were in maintenance, while the other two were on SAR duty. After the flying display, the media had the opportunity to take a close look at the aircraft in the static display.

At the end of the media day, Brigadier General Dr. József Koller and Major General Nándor Kilián, Chief of the Hungarian Air Force answered the journalists' questions.

Eurocopter AS350 *Écureuil*, Mil Mi-24P *Hind*, and Zlin 242L (left to right)



- H145M in SAR configuration with the high-performance winch mounted at the helicopters starboard side (main image)
- The first H145M was flown to Szolnok on 18 November 2019 (inset)

MALTA INT'L AIRPORT 2004

PHOTOS BY ANTHONY SEYCHELL



Technical overnight stop of Royal Air Force Jaguars. The four aircraft, one Jaguar T-4 two-seater and three Jaguar GR.1A single-seaters are assigned to No.41 Squadron at RAF Coltishall .



RAF Hawk T.1 of No. 100 Sqn *left*

RAF Jaguar T4 *bottom left* and
Jaguar Gr.1A *bottom right*, both
of No. 41 Sqn





▲ Boeing 747-400, Dubai Air Wing
▼ Boeing 737-700BBJ, Government of Tunisia



Boeing 707-300, Government of Romania ▲
Airbus A319CJ, Government of Thailand ▼





In October, RAF No. 28 Squadron from RAF Benson deployed some of their Merlin HC.3s for a couple of days to Malta to conduct crew training



This Royal Navy Lynx HAS.3GM conducted exercises with Armed Forces of Malta. The Lynx, was taking part from a Royal Navy ship in port.



This Italian Navy HH-3F *Pelican* of the 15 Stormo participated in the SAR-exercise CANELE 2004



▲ French Navy Falcon 10MER of Escadrille 57S at BAN Landivisau
▼ French Navy Nord 262E *Fregate* of Escadrille 2S



Italian Coast Guard ATR 42-400 MP of the 3° Nucleo Aereo
Italian Coast Guard Piaggio P166DL-3\SEM-1 during SAR-exercise CANELE 2004



CZECH AIR FORCE RETIRES YAK-40

REPORT AND PHOTOGRAPHY BY IGOR BOZINOVSKI



The Vzdušné síly Armády České republiky (Czech Air Force, CzAF) retired its two Yakovlev Yak-40 (NATO: Codling) three-engined VIP-configured jet planes on an official ceremony that took place on 2 September at the 24th Transport Air Base located at Prague-Kbely military airbase.

The retirement ceremony saw the last flight of Czech Air Force's Yak-40-S2 (tactical/serial numbers 0260/9940260 and Yak-40K 1257/9821257). These aircraft were part of 25 Yak-40s acquired by the former Czechoslovakia in the period of 1974 to 1979. Seventeen Yak-40s were delivered to the Czechoslovak Airlines with the rest joining the Air Division of the Ministry of the Interior. In 1981, two of the Ministry's aircraft were transferred to the Air

Force's 3rd Transport Air Regiment at Prague-Kbely.

The retirement of the Yak-40s slightly decreased CzAF VIP transport capacities as the service's 241st Transport Squadron remains equipped with three modern VIP planes: two Airbus A319CJ's and one Bombardier CL-600-2B16 Challenger 601-3A.

The fixed-wing military transport fleet also operates

- six Let L-410 Turbolet twin-engine short-range transport aircraft:
 - o two transport-configured L-410UVP-E20Ms (2312/892312 and 2602/912602)
 - o two VIP-configured L-410UVP-E14 (2601/912601) and L-410UVP-E2 (2710/922710)
 - o two special-configured L-410FGs for aero-

photography (1525/851525) and radio-calibration (1526/851526)

- and four Airbus C-295M medium airlifters, all in service with CzAF's 242nd Transport and Special Squadron.

In December 2019, the Czech Republic signed a contract for the acquisition of two additional winglets-equipped C295s that are now due for delivery in the first half of 2021. This agreement will grow the CzAF C295M fleet to six aircraft and will also see upgrades of the existing four transporters of the same type.

Having made its first flight in 1966 and being produced in 1,011 (some sources quote 1,013) examples, the

Yak-40 airliner is at the sunset of its career and is no longer flying within NATO. However, up to two dozen such planes are still serving the militaries of Angola, Cuba, Ethiopia, Equatorial Guinea, Kazakhstan, Madagascar, Russia, Syria, and Yemen.



This Yak 40 was photographed on 25 May 2019 at the Czech Air Force Čáslav Air Base

MUSEO DEL AIRE OF SPAIN

PHOTOREPORT BY PACO JOVER



This Lockheed F-104G *Starfighter* is one of 18 single-seaters that were operated along with three TF-104G two-seat trainers by the Spanish Air Force from 1965 until 1972. Within seven years of service the F-104 fleet accumulated about 17,000 flight hours with an excellent safety record. None of the aircraft were lost.



left – The North American F-86 represented an important step for the Spanish Air Force in its transition to the jet era. Spain received 270 Sabres based on an agreement set in 1953 with the United States. The F-86 Sabre exhibited in the museum shows the livery of the Ascuá Patrol, the aerobatic displaying team of the Air Force in those years.

right – RF-4C *Phantom II*. The F-4 *Phantom II* was manufactured by McDonnell Douglas from 1958 until 1979. The Spanish Air Force acquired a total of 40 F-4C fighters and 18 RF-4C's, the reconnaissance version.



Museo de Aeronáutica y Astronáutica

About two hundred aircraft and a lot of models, engines, equipment, uniforms, ... displayed in seven hangars and an outdoor exhibition area with a total of 67.000 square meters.

The main mission of the Museo de Aeronáutica y Astronáutica (Museum of Aeronautics and Astronautics) is to acquire, conserve and display the aircraft, equipment, and associated objects that constitute the historical heritage of the Spanish Air Force with some other aircraft and objects coming from other air forces, civil aviation and Spanish Navy and Army.

It is a National Museum within the structure of the Defence Department and belongs to the Historic and Cultural Service of the Spanish Air Force.

The Museo de Aeronáutica y Astronáutica was created in 1966 and it was opened in 1981 at its present location, Cuatro Vientos airport (Madrid). Cuatro Vientos is the oldest airport in Spain, it was built in 1911 and there are also located an air base and some other military facilities. Spanish aviation has its origin in Cuatro Vientos.



right – This F-4C *Phantom II* on display at the museum is an ex USAF (serial number 64-0820). The spanish F-4Cs are the only "C" models – new and second-hand – ever exported. The Spanish Air Force operated the F-4s from end of 1971 until early 1989. They were replaced by the EF-18 *Hornet*.



left – CASA C-101 Aviojet basic and advanced trainer developed by CASA (Construcciones Aeronáuticas, S.A.), nowadays AIRBUS, for the Spanish Air Force Academy. The C-101 replaced as a trainer the Lockheed T-33 Shooting Star and Hispano Aviación HA-200 Saeta. The roll-out of the prototype displayed in the museum was on 27 May 1977

right – Hispano Aviación HA-220 Super Saeta, use by the Spanish Air Force as dedicated ground attack aircraft





- The Douglas C-54A Skymaster *inset left*
- The CASA-352L is a Ju-52/3m built under license in Spain by CASA. The Spanish Air Force operated the CASA-352L until 1974 *inset right*
- CASA-207A Azor. A total of 22 CASA-207s were built and served from 1960 to the early 1980s in the Spanish Air Force as transport aircraft *main image*



▲ North American T-6G *Texan*
▼ CASA C-127 (Dornier D0-27)

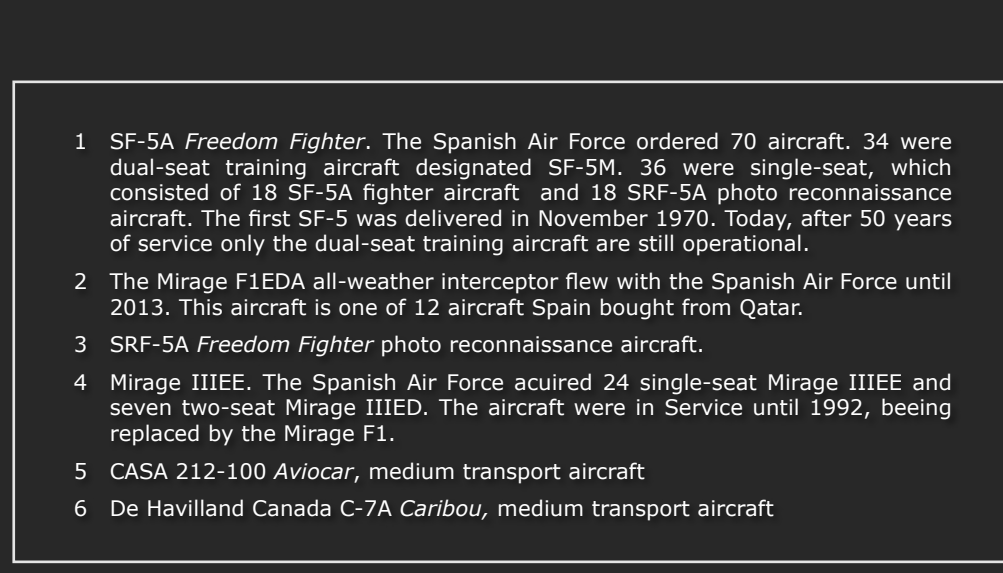


Grumman HU-16 *Albatross* ▲
Consolidated PBV-5A *Catalina* ▼





The Boeing KC-97L *Stratotanker* is an air refueling aircraft developed from the Boeing C-97 Stratofreighter. The Spanish Air Force bought three KC-97L and they were based in Torrejon Air Base for the air to air refueling of the F-4C Phantom of the 12th Wing.



- 1 SF-5A *Freedom Fighter*. The Spanish Air Force ordered 70 aircraft. 34 were dual-seat training aircraft designated SF-5M. 36 were single-seat, which consisted of 18 SF-5A fighter aircraft and 18 SRF-5A photo reconnaissance aircraft. The first SF-5 was delivered in November 1970. Today, after 50 years of service only the dual-seat training aircraft are still operational.
- 2 The Mirage F1EDA all-weather interceptor flew with the Spanish Air Force until 2013. This aircraft is one of 12 aircraft Spain bought from Qatar.
- 3 SRF-5A *Freedom Fighter* photo reconnaissance aircraft.
- 4 Mirage IIIIEE. The Spanish Air Force acquired 24 single-seat Mirage IIIIEE and seven two-seat Mirage IIIED. The aircraft were in Service until 1992, being replaced by the Mirage F1.
- 5 CASA 212-100 *Aviocar*, medium transport aircraft
- 6 De Havilland Canada C-7A *Caribou*, medium transport aircraft



▲ Blériot XI, modified by the Vilanova Brothers - The oldest airplane preserved in Spain
▼ Replica of a Cierva C30MZA autogyro



▲ Bücker Bü 133C Jungmeister
▼ La Cierva C-19MK-4P autogyro, built in 1931





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