SPANISH PREDATORS

The Spanish Army airmobile force known as FAMET (Fuerzas Aeromóviles del Ejército de Tierra) is completing a major upgrade, introducing the latest European rotary platforms to provide an enviable capability for this impressive fighting force.

REPORT **Fréderic Lért** PHOTOS **Anthony Pecchi**

SUMMER, AND THE north of Spain is dry and dusty, ravaged by the unrelenting sun and soaring temperatures. The San Gregorio exercise area, close to the town of Zaragoza, is one of the biggest in Europe, with armored vehicles criss-crossing rough tracks, kicking up plumes of dust that are quickly swept away by the strong winds. The FAMET (Fuerzas Aerómoviles del Ejercito de Tierra, Spanish Army Airmobile Forces) deploys its helicopters here to work closely with the ground forces, and it serves as an ideal opportunity to check out the new hardware in town.

The introduction of the Airbus Tiger HAD (Helicoptere d'Appui Destruction) attack helicopter and the NH Industries NH90 Caiman to operate alongside the existing CH-47D Chinooks means the FAMET now boasts a modern and impressive rotary force. When *Combat Aircraft* visited the San Gregorio exercises, the Tigers and NH90s were being put through their paces, preparing for potential operational deployments.

The Spanish Army's helicopter modernization began in the late 1990s, when it sought to replace its Bo 105 anti-tank platforms. This triggered a competition between the new European Tiger and proven American AH-64 Apache. Spain evaluated both the German Tiger UHT (Unterstützungshubschrauber Tiger) anti-tank-optimized variant and the French Tiger HAP (Hélicoptère d'Appui et de Protection), which is better suited to support-protection missions. In reality, Spain favored the HAP, but its lack of anti-tank capabilities led to the development of a hybrid version — the HAD (Helicoptero de Ataque y Destrucción in Spanish) — which essentially blended an anti-tank role into the HAP. The versatility of the HAD added another essential quality for the Spanish, the more powerful MTR390-E (enhanced) turbines offering 14 per cent more power over the HAP.

The Tiger was proclaimed the winner in September 2003, Eurocopter (now Airbus Helicopters) and its partners underpinning the deal with a meaningful industrial partnership with Madrid. A Spanish subsidiary of the helicopter company was established to build tail booms for worldwide Tiger customers and Spanish engine manufacturer ITP became associated with the MTR390-E program.

Afghan experience

The Spanish order covered 24 new Tigers, but to accelerate their production the first six examples were HAP-standard, meaning they would be available more readily. The aim was that they could be upgraded subsequently and brought up to HAD standard later. The first and second Tiger HAPs were delivered in December 2005 and March 2006, a third following in June 2006. These all went straight to the Franco-German training school at Le Luc in Provence where they were used to start training Spanish instructors. In April 2007, the first examples arrived at Almagro, in the province of Ciudad Real, where they joined the ranks of BHELA I (Batallon de Helicópteros de Ataque I).

In Spanish service, Tigers are formally known as HA.28s (Helicóptero de Ataque), but most refer to them as Tigers. Between March and December 2013, three of the HAP Tigers deployed to Afghanistan as part of the International Security and Assistance Force (ISAF). Based in Herat in the west of the country, their combat debut was geared towards ISAF convoy escort plus some fire support missions. It was a tough assignment, with temperatures up to around 50°C (122°F) during the day in the middle of the summer, plus significant dust and steep local terrain. Nevertheless, the FAMET reported back with glowing success, but it's worth noting that the Tigers flew missions with the 30mm gun and only one rocket launcher loaded, due to the altitude and temperature affecting performance.

Left: A FAMET Tiger HAD leads an NH90 TTH during recent exercises. The pairing represents an important advance in overall capability for the air arm.


15
ET 415

The FAMET rotary family, led by a Tiger with an NH90 and a CH-47D.

The three Afghan HAPs had been back from Afghanistan for just over a year when the first two improved-standard HAD-E helicopters arrived at Almagro. A total of 17 are now there, with one example remaining in the Airbus Helicopters facilities at Albacete for development work on future standards. Plans to upgrade the original six HAPs to HAD configuration were abandoned on cost grounds — when they each reach a deep overhaul interval, they are removed from service and stored. Today only one or two remain active and it is expected that they will all have gone within a decade of having entered service.

Combat-ready

The Tiger HADs have proved to be capable and extremely popular. 'It's a powerful and solid aircraft,' Captain Jorge Alfonso Lacort Chasco told *Combat Aircraft*. He's well placed to comment, having already clocked up more than 1,000 flying hours on the type. He was one of the first pilots to be trained on the Tiger and is now the chief instructor at BHELA I. 'We train our pilots in-house with a fixed flight trainer unit and a full flight

HAP TO HAD

The first six Spanish Tigers were delivered in HAP standard, with the aim for them to be upgraded later to their ultimate configuration. The HAPs were initially sent to the Airbus facility in Albacete to be improved to HAP/E (España) standard. HAPs 1, 2 and 3 needed extensive work — for example, they were not able to employ Mistral air-to-air missiles. HAPs 4 and 5 were a little more evolved when they were delivered, and thus required less work, while HAP 6 was delivered in full HAP/E fit.

Right page: A fabulous head-on shot of an NH90 during operations with ground forces. The item under the nose is the Honeywell weather radar.

Left top to bottom: Service personnel work with Airbus Helicopters experts to learn the complexities of the new equipment.

The two pilots wear the Thales TopOwl binocular helmet-mounted display and sight.

A rear crew member mans the door gun as the NH90 flashes along at low level.

simulator,' he explained. 'A new pilot can be qualified on the Tiger after 30 hours [of simulator time] and a similar number of hours of live flight. The pilot is then qualified as 'combat-ready one' and can fly day and night missions using all of the Tiger's weapons. After 500 flying hours of experience, the pilot can be judged as being 'combat-ready two', a qualification that is obtained after a six-month course. The next qualification is that of instructor.'

The main offensive strength for the Spanish Tiger HAD lies in the Spike ER missile from Israel-based defense technology company Rafael, with a range with a range of up to five miles (8km). The missile features an optical camera to enable the crew to modify the missile's trajectory until the last seconds before impact. With this lock-on-after-launch guidance mode, the missile can track its target once in flight. It also has a fire-and-forget mode where the target must be identified by the missile's infra-red seeker. The Spike ER was tested by Spain in September 2008 with seven launches; five were used to test the separation with the helicopter in stationary and in advancing flight, while a further two tested the range.

Heavy guns

The FAMET has teamed the Tiger with its new NH90, the HT.29 in Spanish classification. Spain ordered a total of 22 NH90s in 2006 — a marked reduction from the 45 originally planned — comprising 16 TTHs (Tactical Transport Helicopters) for the FAMET and six for the air force, the latter using the aircraft for search and rescue and VIP transport. Last November, Spain agreed to order an additional 23 examples: another 10 for the army, six for the air force and seven for the navy. All of these helicopters should be delivered before the end of 2028. There is talk of a third buy to replace the last Cougars and Super Pumas in Spanish service.

Unlike the French NH90s, the Spanish helicopters are powered by General Electric CT7 engines, offering power equivalent to the Safran Helicopter Engines RTM322 in the French aircraft.

BHELMA III (Batallón de Helicópteros de Maniobra III) at Agoncillo, near the town of Logroño, has to date received 12 NH90s (however, the first remains with Airbus Helicopters for future developments). They were delivered with 12.7mm machine guns for self-protection, and as the guns occupy a

large area of the side doors, embarkation and disembarkation of troops is achieved through the rear ramp. Acceptance tests have also begun with MAG58 7.62mm machine guns in the FAMET NH90s.

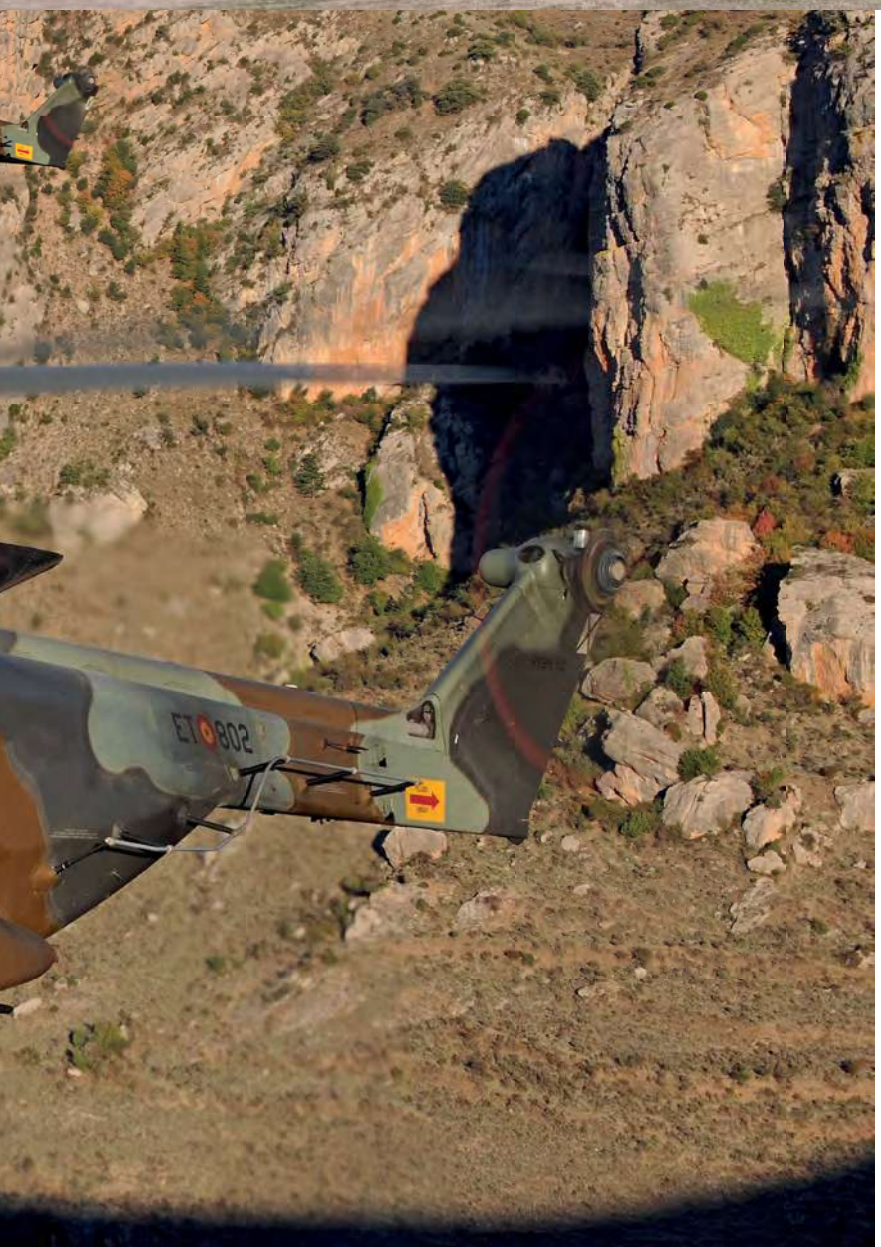
Complex transition

The 13th Spanish NH90 will be delivered this year, a big milestone as it's the first that will be handed over in Standard 2 configuration with the latest self-protection systems. The previous examples will be upgraded between 2020 and 2023, when they reach 600 flying hours.

Lt Col Magin Alvarez Arribas, the unit commander, said, 'The arrival of the NH90 has represented a real step forward for the FAMET and for BHELMA III that flew the Cougar and UH-1 'Huey' before. This is truly a new-generation aircraft with electric flight controls, composite structure and advanced avionics. We started to prepare the battalion two years before the arrival of the NH90. We sent pilots and mechanics to the French Centre de Formation Interarmées [CFIA] in Le Luc and some mechanics even received some further training with Airbus Helicopters in Marignane.'

The transition was complex, with BHELMA III flying all three types of helicopters — 'Huey', Cougar and Caïman — simultaneously for a few months. The 'Hueys' were retired in August 2018 and the Cougars have now been transferred to other units.

The issue of military airworthiness led BHELMA III to devote significant efforts to set up new logistics and maintenance concepts, but with a good deal of experience now under its belt it is turning towards the prospect of operational use. FAMET Cougars and Chinooks are currently deployed to Taji, Iraq, and NH90s could potentially step into this role at any time.



THE RUGGED CHINOOK

The FAMET has been a Chinook operator since the early 1970s, when it received its first CH-47Bs, which were followed by 13 CH-47C. The survivors (17 aircraft in 2019) have all been upgraded to CH-47D standard and they fly with BHELTRA V at Colmenar Viejo near Madrid. The Chinooks have been operating in Afghanistan, from Qual-e-naw in Herat, in support of ISAF. Afghanistan is always challenging due to the terrain, the ever-present dust and the high temperatures. The Chinook's performance is further hampered by almost a ton of additional armor plating. Improved Honeywell 55-GA-714A engines and increased fuel capacity has helped them significantly. Newly built CH-47Fs will start replacing the CH-47D in 2021. In order to prepare for the transition from the D to the F-model, BHELTRA V will reduce its operational tempo at the end of 2020.

Above:
An NH90 TTH and CH-47D fly together during training. When the FAMET upgrades to the CH-47F, the NH90s will most likely assume some of their operational roles.

Left:
A fabulous shot of two NH90s at work in the San Gregorio exercise area.