



## MILITARY ISRAELI A-4 AHIT

### Yom Kippur War

In October 1973, the IDF was involved in a major conflict that threatened the very existence of Israel: the Yom Kippur War, when Egypt and Syria launched a double attack on Israel on Saturday October 6, the day of the Jewish Day of Atonement holiday. After initial difficulties, the IDF was able to recover from a very critical position, and the IDF/AF counterattacked the enemy, thanks to improved tactics.

However, the toll was high: between October 6 and 22, the Skyhawk force lost 53 aircraft, more than half of the total aircraft lost by the IDF/AF. During this war, the US Government launched an emergency Military Aid Program to help Israel, which included 46 A-4E/A-4Fs from the US Navy and US Marine Corps inventories. Seven A-4Ns lost in combat were replaced by increasing the production order to 117 aircraft. After the conflict, some modifications were introduced to the Ahit fleet, the most important being the elongated tailpipe to improve survivability against infrared-guided missiles, such as the SA-7 *Grail* man-portable system.

### Further Combat Operations

Deliveries of the new A-4N to 109, 140 and 149 Squadrons continued after the war. So,

too, did combat operations, mainly against PLO terrorist targets in Lebanon. This activity escalated until the launch of Operation Litani, on March 15, 1978, when Israeli troops entered Southern Lebanon. During this campaign, the Skyhawk force flew CAS and target illumination missions. In August 1978, a new A-4 unit was activated: 147 Squadron 'Flying IbeX' at Hatzetim, equipped with a mix of A-4E, F and N models.

Anti-terrorism operations in Lebanon led the IDF/AF to request the introduction of precision-guided munitions, and this led to the acquisition of laser-guided bombs. The first A-4 unit to gain this capability was 116 Squadron 'The Flying Wing', in 1980, with US-made Paveway and IAI-made Griffin kits, both fitted to the standard Mk80 series bombs.

In the same period, the Skyhawk force started to be reduced. In 1980, 110 Squadron 'Knights of the North' converted to the F-16A, while 149 Squadron 'Shattering Parrot' traded its A-4s for Kfir's. Further changes came with the peace treaty signed with Egypt in March 1979. The return of Sinai to Egypt meant the airbases at Eitham, Etsion and Refidim had to be abandoned. As compensation, the United States financed

the construction of two new airbases in the Negev desert, Ovda and Ramon, while a third, Nevatim, was built by Israel. In November 1981, the Golden Eagle squadron moved to Ramon, and in 1983-1984 the Flying Dragon and the Flying Wing squadrons relocated to Nevatim.

In 1982, a new war broke out, following the PLO's attempt to assassinate the Israeli ambassador in London. Air operations over Lebanon started on June 4, 1982, followed two days later by the ground offensive, Operation Peace for Galilee. The A-4s undertook CAS missions, but also flew leaflet drop and smokescreening missions. The war officially ended on June 12, 1982, but operations in Lebanon continued until the final retirement of the Israeli forces from Lebanon in 2000.

In 1984, 115 Squadron relocated to Nevatim. Then in November 1985, the OTU role was passed from 140 Squadron 'Golden Eagle' to 116 Squadron 'Flying Wing', as

the former converted from the A-4 to the F-16A. In 1986, the Flying IbeX squadron, reduced since 1981 to a reserve unit, was disbanded. In 1990, the FSATS and 102 Squadron 'Flying Tiger' merged into a single unit comprising one operational section and one training section. Budget cuts led to the July 21, 1994 disbandment of 115 Squadron, but in the same year 102 Squadron was reactivated to provide advanced training for future fighter pilots and navigators, and operational readiness.

In 1995, the IDF/AF launched an experimental OTU course with the F-16A/B. Positive results led to the decision to split the OTU course in two: one in the Skyhawks for pilots destined for older types, and one in the F-16A for the future F-16 pilots. This new pipeline started in 1999. Four years later, when 116 Squadron converted to the F-16A, the Skyhawk Advanced OTU passed to 102 Squadron. Operations of the remaining Skyhawk squadrons continued.

### Upgrade Programme

By the late 1990s and early 2000s, it was clear the A-4 would have to fly for many more years because of its training mission, so an upgrade programme was necessary. The first steps in the modernisation were an ACMI-type data recorder introduced for training purposes in 1999, followed in 2002 by the integration of the RADA Electronic Industries ACE-II (Autonomous Combat Evaluation) system to replace the EHUPD. On January 21, 2003 a \$2 million contract for an Ahit prototype upgrade was announced, followed by a full-scale contract awarded on January 5, 2004. This time the modification, called Ahit Meshpach (AhitM, or Improved Ahit), still provided by RADA but installed by IAI, would replace the obsolete Crystal system. The AhitM introduced a ring laser gyro navigation



system, and a mission and fire control unit. In the cockpit, a Nir-Or colour multifunction display and an improved Vectop HUD were installed. The AhitM prototype (aircraft 342) flew in December 2004, and the modification of the whole fleet (about 50 aircraft, half being two-seaters) was completed in about one year. At the same time, IAI was awarded a ten-year contract covering all the maintenance activity on the fleet, under a power-by-the-hour scheme. At that time, the idea was to keep the A-4 in service until 2015-2020, as an advanced trainer.

### Final Years

In July 2006, a second Lebanon War broke out and this too saw the participation of the Skyhawks, even if for the secondary roles of night-time illumination, leaflet drops and electronic support. These tasks were assigned to TA-4s equipped with AN/ALQ-101(V)10 jamming pods.

The advanced training activities of 102 Squadron continued in the following years,

but in 2008-2009 the IDF/AF started the search for a new lead-in fighter trainer to replace both the A-4 and the F-16A in the OTU role. The tender was competed between a US-Korean product, the KAI TA-50, and an Italian product, the Alenia Aermacchi M-346. After many in-depth evaluations, the latter was selected on February 16, 2012. In the same year, the IDF/AF celebrated 45 years of Skyhawk operations. A formal contract for 30 M-346s was signed on July 19, 2012, and the first (serial 102) was rolled out on March 20, 2014, at Alenia Aermacchi's Venegono plant. Deliveries started on July 10 of the same year, when the first two M-346 (locally designated Lavi, or Lion cub) landed at Hatzetim, destined for 102 Squadron.

In 2015, the Israeli Skyhawks, now reduced to fewer than 30 aircraft, recorded their last year of operations. On May 15, the type was formally retired from operational duty, while 102 Squadron continued to operate them just to complete the last OTU course. The venerable Ahit was finally retired from service at Hatzetim air base on December 13, 2015.

1 A line of 102 Squadron TA-4Js and an A-4N. Generations of Israeli combat pilots earned their wings and learned to fight on this aircraft, as it was used for the advanced training until its very end, *Nir Ben-Yossef*. 2 Israeli A-4s were deployed in combat on numerous times during their service career, ranging from the Yom Kippur War in 1973 to the second Lebanon War in 2006, *Nir Ben-Yossef*

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