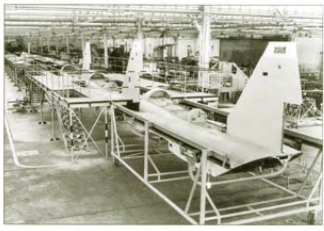

Left: New life for a true veteran – it is commonplace for tankers, transports and bombers to rack up 30 years of service, but less so for fighters. Spain's F-5s are already well past 30 years old, and the F-5M upgrade should ensure that they serve until around 2020, by which time they will have served for 50 years.

Right: A scene from the Getafe plant shows the rear fuselages for the 3rd, 4th and 5th SF-5Bs in the foreground, with the second aircraft nearing completion further along the line. The first eight SF-5Bs were Northrop-built, but supplied in three stepped-down degrees of assembly.

deadlines, the MAE accepted the first offer, but only under a set of very tight contractual conditions. The supply-contract was signed on 20 December 1965 and included 70 F-5s worth 3.862 million Pesetas. Also included were the delivery of ground equipment and the initial spare parts package worth 509 million Pesetas. The contract also covered the further supply of spare parts necessary for 30,000 flying hours, worth 214 million Pesetas. The unit cost per aircraft was $7.7 million Pesetas, significantly lower than the 41.1 million Pesetas for aircraft procured direct from Los Angeles. The two-seater worked out to be 17 percent more expensive than the single-seater.

On 20 February 1966 the Spanish government ratified the contract with the following delivery schedule: the 70 aircraft were split in seven equal batches, whereby the first batch of 10 (including the first eight F-5Bs to be sent to Spain by Northrop for final assembly) had to be handed over within 40 months (20 June 1969). Eight months later the following batch of 10 aircraft were to be delivered, followed by another 10 eight months after that. The remaining 40 aircraft were to be delivered at a rate of 10 aircraft every four months. Final delivery was determined to take place no later than 20 December 1971. All 36 F-5Bs were to be delivered first so that training could start.

Building the Spanish F-5

Work was divided between CASA's Getafe and Sevilla plants. Sevilla produced the front and central part of the fuselage, including wiring and equipment, as well as the complete cockpit. Getafe produced the aft fuselage, stabilisers, wings, landing gear, external fuel tanks and all other components of Spanish origin. Final assembly was performed at Getafe, as well as functional- and flight-testing. Several engineers, technicians and operators from both plants were sent to Los Angeles to become familiar with the production tools, machinery and manufacturing processes.

Setting up a completely new, state-of-the-art production line required some major investment by CASA. Northrop transferred all the documentation and parameters necessary to set up such a modern production facility. All components or materials that could not be produced or bought in Spain were acquired through Northrop, which in turn would control quantity and quality before delivery to CASA. The parts were shipped to Bilbao and unpacked in a special customs office at Getafe. From there they were distributed to Sevilla and Getafe. The J85 engines were directly supplied by General Electric International through a contract approved by the MAE, which included technical assistance. These and some other equipment had to be flown in directly from the States. Avionics were also US-supplied.

To facilitate the establishment of the CASA line, it was decided to send the first eight F-5Bs to CASA in different stages of completion. Northrop sent the first two aircraft complete but partially disassembled, requiring only assembly and test by CASA. The following three required installation of all their equipment within the airframe structure, and the final three were supplied completely in component form.

As can be seen from the schedule below, CASA met nearly all the deadlines set forth in the contract, and no major defects were detected during the test and delivery flights. Only during the completion of the fourth batch did some delays occur in the delivery of specific equipment, resulting in the splitting of the batch. As a result, eight batches were delivered.

Batch	No.	notes
1	10	CE.9-001 first flight 22/5/68 CE.9-002 first flight 6/68 CE.9-003 and 004 first flights end 1968; CE.9-005, 006, 007, 008 first flights 1st quarter 1969; delivery 19/6/69
2	10	delivery 20/2/70
3	10	delivery 20/8/70
4	3	delivery 1/71, due to delay
5	7	delivery 2/71, due to delay
6	10	delivery 5/71
7	10	delivery 9/71
8	10	delivery 20/12/71

The first batch of 10 was handed over to the Air Force one day earlier than planned, on 19 June 1969, in the presence of the Spanish ministers for Air, Industry and Treasury, and the directors of INI and Northrop. While production of the Freedom Fighter was in full progress, it was decided to convert 18 of the 36 single-seaters into the tactical reconnaissance sub-variant, retaining their two M39 cannon.

A last remnant of a bygone age, this is one of two aircraft which retained a natural metal finish even after they underwent the SF-5B+ structural upgrade. They are being painted as part of the current F-5M modification. Ala 23 has 21 two-seaters allocated to two squadrons: Escuadrones 231 and 232.