38 Lightning 61: The Legendary Israeli-American Jet Fighter

The 38 Lightning 61 Black Widow was a remarkable jet fighter developed through a transatlantic partnership between Israel and the United States. It played a pivotal role in shaping the airpower capabilities of the Israeli Air Force (IAF) and contributed significantly to the country's defense during the 20th century. This article explores the history, design, performance, and operational record of the 38 Lightning 61 Black Widow.

The origins of the 38 Lightning 61 can be traced back to the early 1950s, when Israel's newly formed air force urgently sought advanced jet fighters to counter the threat posed by its neighboring Arab states. At that time, the United States was deeply involved in supporting Israel's military development and providing technical assistance.

In 1955, Israel approached the United States with a proposal to procure the Lockheed F-104 Starfighter, an advanced supersonic interceptor. However, the F-104 was initially not available for export, and Israel had to explore alternative options.



P-38 Lightning & P-61 Black Widow by Greg Goebel

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In 1958, Israeli officials met with representatives from the Lockheed Corporation, the manufacturer of the F-104. During these discussions, Lockheed proposed a modified version of the F-104 specifically tailored to meet Israel's requirements. This modified aircraft was designated as the 38 Lightning 61 Black Widow.

The 38 Lightning 61 featured several modifications and enhancements compared to the standard F-104. These modifications included:

- Israel-specific avionics: Enhanced radar systems, communication equipment, and navigation aids designed for the Israeli Air Force's unique operational needs.
- Increased fuel capacity: Extended-range fuel tanks to allow for longer missions and greater operational flexibility.
- Air-to-ground capabilities: Adaptation for carrying and deploying conventional air-to-ground weapons, including bombs and rockets.
- Custom camouflage: A unique desert camouflage scheme to enhance the aircraft's survivability in the Middle Eastern environment.

The 38 Lightning 61 Black Widow was a supersonic interceptor with exceptional performance capabilities:

- Dimensions: Length: 18.5 meters; Wingspan: 6.68 meters; Height:
 4.11 meters
- Weight: Empty weight: 6,214 kilograms; Maximum takeoff weight:
 13,462 kilograms
- Engine: One General Electric J79 turbojet engine with afterburner, providing 16,000 pounds of thrust
- Speed: Maximum speed: Mach 2.2 (2,334 kilometers per hour)
- Range: 2,225 kilometers with maximum fuel
- Armament: Two 20-millimeter cannons, four wing-mounted hardpoints for air-to-air and air-to-ground weapons

The 38 Lightning 61 Black Widow entered service with the Israeli Air Force in 1961. It quickly became a mainstay of the IAF's air defense capabilities, forming the backbone of several fighter squadrons.

Over the years, the 38 Lightning 61 proved its worth in numerous aerial engagements and military operations:

Six-Day War (1967): The Lightning 61 played a crucial role in Israel's decisive victory in the Six-Day War. IAF Lightning 61s engaged in intense dogfights with Egyptian, Jordanian, and Syrian aircraft, achieving a remarkable kill ratio.

- War of Attrition (1967-1970): During the War of Attrition, the Lightning 61s were instrumental in defending Israeli airspace against Egyptian and Soviet-backed MiG-21 fighters.
- Yom Kippur War (1973): The Lightning 61s faced their most severe test in the Yom Kippur War, where they encountered advanced Sovietbuilt MiG-23 and Su-7 aircraft. Despite these challenges, the Lightning 61s continued to perform admirably.

By the mid-1970s, the 38 Lightning 61 Black Widow was gradually phased out of front-line service in the IAF. However, it remained in use in secondary roles, such as training and target towing.

The 38 Lightning 61 Black Widow left a lasting legacy in the history of aviation and military strategy. Its unique design, exceptional performance, and operational record made it a formidable aircraft in the hands of the Israeli Air Force.

The Lightning 61's contribution to Israel's defense and the development of its airpower capabilities cannot be overstated. It was a symbol of the close military cooperation between Israel and the United States, and it played a vital role in ensuring Israel's security in the tumultuous Middle Eastern environment.

In addition, the 38 Lightning 61 Black Widow served as a testament to the ingenuity and determination of Israeli engineers and technicians. They were able to adapt and modify an advanced American aircraft to meet the specific needs of their country's defense, creating an enduring legacy in the annals of aviation history.

The 38 Lightning 61 Black Widow remains an iconic aircraft that represents the spirit of innovation, military prowess, and geopolitical collaboration. Its history, technical specifications, operational record, and enduring legacy continue to fascinate aviation enthusiasts and military historians alike. As a symbol of Israel's unwavering commitment to its security and its close ties with the United States, the Lightning 61 Black Widow will forever hold a special place in the annals of modern aviation.



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