Launch Press Kit

NROL-87

NATIONAL RECONNAISSANCE OFFICE

NROL-87

The National Reconnaissance Office (NRO) is proud to partner with SpaceX on our first National Security Space Launch aboard a Falcon 9 rocket. The NROL-87 mission will launch from Vandenberg Space Force Base, California, and carry a national security payload designed, built, and operated by the agency. NROL-87 supports NRO's national security mission to provide intelligence data to the United States' senior policy makers, the Intelligence Community, and Department of Defense.

NRO Mission

The NRO is an Intelligence Community element and Department of Defense organization responsible for developing, acquiring, launching, and operating America's reconnaissance satellites, as well as operating associated data processing facilities in support of national security. Using NRO data, the National Security Agency, National Geospatial-Intelligence Agency, and other NRO mission partners produce intelligence products for the President, Congress, national policymakers, warfighters, and civil users. The NRO uses a variety of satellites to meet these mission needs. This approach allows the NRO to pursue a hybrid overhead architecture designed to provide global coverage against a wide-range of intelligence requirements, carry out research and development efforts, and assist emergency and disaster relief efforts in the U.S. and around the world.

NRO Launch-87 logo is of a wild mountain goat standing proud atop a mountain peak remaining watchfully alert. The NRO maintains constant vigilance from above in protecting our nation and its citizens. The snow-capped mountain in the background represents our nations's unmatched preeminence in space.

To read more about the logo inspiration, visit our social media accounts on Facebook, Instagram, and Twitter.

Rocket & Launch Facts

Falcon 9 is a two-stage rocket designed and manufactured by SpaceX for the reliable and safe transport of satellites and the Dragon spacecraft into orbit. The Block 5 variant is the fifth major interval aimed at improving the ability for rapid reusability.

The Falcon 9 rocket has been launched 125 times with 85 landings and 67 reflown rockets (as of Dec. 2021)

Payload

Made of a carbon composite material, the fairing protects satellites on their way to orbit. The fairing is jettisoned approximately 3 minutes into flight, and SpaceX continues to recover fairings for reuse on future missions.

First Stage

Falcon 9's first stage incorporates nine Merlin engines and aluminum-lithium alloy tanks containing liquid oxygen and rocket-grade kerosene (RP-1) propellant.

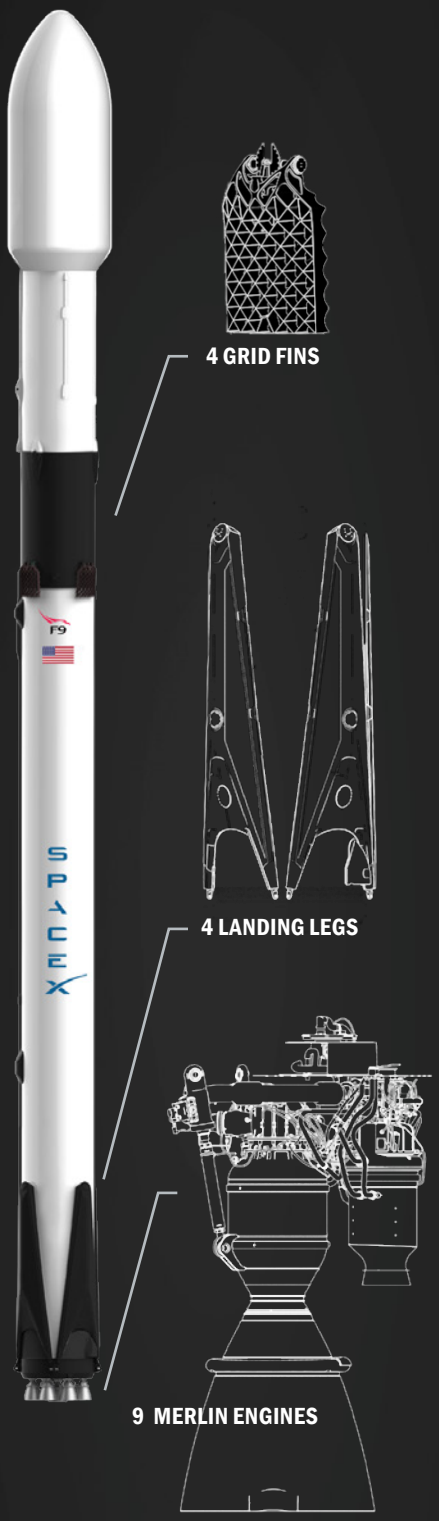
Falcon 9 generates more than 1.7 million pounds of thrust at sea level.

Interstage: The interstage is a composite structure that connects the first and second stages, and houses the pneumatic pushers that allow the first and second stage to separate during flight.

Grid fins: Falcon 9 is equipped with four hypersonic grid fins positioned at the base of the interstage. They orient the rocket during reentry by moving the center of pressure.

Second Stage

Powered by a single Merlin Vacuum Engine, the second stage delivers Falcon 9's payload to the desired orbit. The engine ignites a few seconds after stage separation, and can be restarted several times to place multiple payloads into different orbits.



Site Info

Space Launch Complex 4E (SLC-4E)

SLC-4E was formerly called PALC2-4 and previously used by Atlas and Titan rockets between 1963 and 2005. It was built for use by Atlas-Agena rockets, but was later rebuilt to handle Titan rockets. The designation SLC-4E was applied at the time of the conversion to launch Titans. SLC-4E is leased as a launch site for the Falcon 9 rocket, which first flew from Vandenberg on Sept. 29, 2013 following a 24-month refurbishment program, which had started in early 2011.

Landing Zone 4 (LZ-4)

SpaceX began a five-year lease of Launch Complex 4 West in February 2015. The site is used as a landing pad to bring back Vertical Take Off Vertical Landing (VTVL) Return-To-Launch-Site (RTLS) first-stage boosters of the reusable Falcon 9 launch vehicle. That pad was later named by SpaceX as Landing Zone 4, and first used operationally for a Falcon 9 booster landing in 2018.

Courtesy SpaceX

Recent Successes

The NRO is the best in the world at providing overhead intelligence, surveillance, and reconnaissance to more than **a half million government users**—including every member of the Intelligence Community, two dozen domestic agencies, our nation's military, lawmakers, and decision makers.

In April 2021, the National Reconnaissance Office launched its NROL-82 mission aboard a United Launch Alliance Delta IV Heavy from Vandenberg Air Force Base, California in the first launch of 2021. A Northrop Grumman Minotaur I rocket launched NROL-111 as the second and final launch of the year.

Visit **NRO.gov/News-and-Media/Press-Releases/** to view the latest launchpress releases.

NROL-111 launches out of NASA's Wallops Flight Facility, Virginia, June 15, 2021.

Future Launches

- NRO has a busy launch year planned for 2022, with more than a half-dozen launches scheduled and nearly a dozen payloads planned for orbit. The year kicks off with NROL-87 in February out of Vandenberg Space Force Base. Millions of people depend on the vital intelligence NRO capabilities provide every day. Additional information on upcoming launches will be made available at **NRO.gov/launch.**

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Courtesy SpaceX