

When President John F. Kennedy issued his 1961 challenge for the United States to send humans to the Moon and back by the end of that decade, a site was needed to test the powerful rocket engines and stages that would propel them on the historic journey.

For NASA officials, the rough terrain of Hancock County, Mississippi, provided five essentials for testing the large Apollo Program engines and stages: isolation from large population centers, water and road access for transportation, available public utilities, supporting local communities, and a climate conducive to year-round testing. The site was selected – and in May 1963, workers cut the first tree to launch a daunting building project. The effort marked the largest construction effort in the state of Mississippi and one of the largest in the United States at the time.

Despite a pressing schedule, inevitable setbacks and even the disruption of Hurricane Betsy in 1965, construction workers prevailed. On April 23, 1966, a Saturn V second-stage prototype was test-fired on the newly completed A-2 Test Stand at the site. With the shake, rattle and roar of the test, south Mississippi was blasted into the space age.

Until 1970, NASA's Stennis Space Center est-fired first and second stages of the Saturn V rockets used in the Apollo Program. It then tested main engines for NASA's space shuttle. From 1975 to 2009, the south Mississippi site tested every main engine used to power 135 space shuttle missions.

NASA Stennis now is testing RS-25 rocket engines for the SLS (Space Launch System), being built to carry humans back to the Moon as part of NASA's Artemis missions and, ultimately, to Mars. It tested the core stage that powered the maiden Artemis I mission and will test all RS-25 engines that will help launch future Artemis missions to deep space.

In addition to that testing, the center is partnering with private companies to test engines and components for various commercial and military missions.

Into its sixth decade of NASA support, NASA Stennis continues to build on its rich history as the nation's largest rocket engine test site – a place where space dreams are powered into reality.

Front image: NASA conducts its first test at then-Mississippi Test Facility (now NASA's Stennis Space Center) on April 23, 1966, on the A-2 Test Stand.

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Saturn V rocket stages were tested at NASA's Stennis Space Center, including stages that carried the first humans to the surface of the Moon during the Apollo 11 mission.

2,307

Space shuttle main engine tests were conducted at NASA Stennis from May 19, 1975 to July 29, 2009, totaling 820,475.68 seconds of hot fire.

1 MILLION

Seconds of space shuttle
main engine hot fire
– including tests and
launches – was achieved
during a test on the A-2
Test Stand at
NASA Stennis on
January 24, 2004.

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On April 4, 2019, NASA
Stennis completed testing
of all 16 former space
shuttle main engines that
will power the first four
flights of NASA's new
SLS (Space Launch
System) rocket, including
missions returning
astronauts to the Moon