Preparing the Orion crew module for its first flight test in December actually began a few years ago. The crew module for Orion's flight test arrived at Kennedy Space Center in Florida in June 2012 and was transported to the Neil Armstrong Operations and Checkout Building high bay for manufacturing, processing and preflight testing.

During the next two years, Orion prime contractor Lockheed Martin and NASA engineers and technicians built-up the crew module from a green shell to a fully functional spacecraft. Many tests were performed to prepare Orion for its flight test.

Orion's service module arrived at Kennedy Space Center and also was transported to the Operations and Checkout Building for build-up and processing. The module was completed with the installation of the fairings that protect it in the early stages of launch ascent.

Orion's heat shield, containing more than 200 instrumentation sensors, was installed.
The heat shield will protect Orion during its re-entry into Earth's atmosphere and splashdown in the Pacific Ocean.

Moving one step closer to the flight test, the Orion Crew Module was stacked atop the Service Module in June. Tile panels were installed around the spacecraft and then both modules were put through their final system tests.

On Sept. 11, the Orion stack was transported from the Operations and Checkout Building to the Payload Hazardous Servicing Facility. Inside this facility, the spacecraft was fueled with ammonia, hydrazine and high-pressure helium ahead of its December flight test.

The four major components for Orion's Launch Abort System, including the launch abort motor and the attitude control motor, arrived at Kennedy last year and were transported to the Launch Abort System Facility for processing, testing and integration.

In late September, Orion was moved from the Payload Hazardous Servicing Facility to the
Launch Abort System Facility.

Inside the high bay, the Launch Abort System was lowered and attached to Orion. The system is designed to protect astronauts if a problem arises during launch by pulling the spacecraft away from the falling rocket. Orion waited inside the Launch Abort System Facility until the United Launch Alliance Delta IV Heavy rocket was ready for integration with the spacecraft.

Earlier this year, the Delta IV core and starboard boosters arrived by barge in March, and were offloaded and transported to the Horizontal Integration Facility near Space Launch Complex 37 at Cape Canaveral Air Force Station in Florida. The port booster and second stage followed in early May.

The Delta IV central core booster was mated to the port and starboard boosters. Then the Delta IV second stage was mated to the rocket's central core booster.

The Delta IV rocket for Orion's flight test
rolled out of the Horizontal Integration Facility

00:03:01,900 --> 00:03:05,560
on Sept. 30 and made the trek to the launch pad.

00:03:05,560 --> 00:03:12,449
In the early morning on Oct. 1, the nearly 180-foot-tall launch vehicle was carefully

00:03:12,449 --> 00:03:18,379
lifted into the vertical position and then raised into the Mobile Service Tower on the pad.

00:03:18,379 --> 00:03:24,870
In early November, the Orion stack was transported to the launch pad and integrated to the rocket.

00:03:24,870 --> 00:03:31,469
Tests were performed to verify readiness for launch. After more than two years of work,

00:03:31,469 --> 00:03:34,949
Orion is now ready to soar on its first flight test.