

ISRO TESTS BOOSTER FOR GAGANYAAN

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The HS200 rocket booster undergoing static test at Sriharikota on Friday. Special Arrangement

The Indian Space Research Organisation (ISRO) has successfully carried out the static test of the HS200 solid rocket booster, taking the space agency one more step closer to the keenly awaited Gaganyaan human spaceflight mission.

The test was held at the Satish Dhawan Space Centre, Sriharikota, on Friday morning.

Designed and developed by the Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram for over two years, the HS200 booster is the 'human-rated' version of the S200 rocket boosters used on the geosynchronous satellite launch vehicle Mk-III (GSLV Mk-III), also called the LVM3.

The GSLV Mk-III rocket, which will be used for the Gaganyaan mission, will have two HS200 boosters that will supply the thrust for lift-off.

The HS200 is a 20-metre-long booster with a diameter of 3.2 metres and is the world's second largest operational booster using solid propellants.

During Friday's test, about 700 parameters were monitored and the performance of all the systems were normal, ISRO said.

Loaded with 203 tonnes of solid propellant, the HS200 booster was tested for a total duration of 135 seconds.

ISRO Chairman S. Somanath and VSSC Director S. Unnikrishnan Nair were present during the test.

"The successful completion of this test marks a major milestone for the prestigious human space flight mission of ISRO, the Gaganyaan, as the first stage of the launch vehicle is tested for its performance for the full duration," ISRO said in a statement on Friday.

Since Gaganyaan is a manned mission, the GSLV Mk-III will have improvements to increase reliability and safety to meet the requirements of 'human rating.'

The control system used in the HS200 booster employs one of the world's most powerful electro-mechanical actuators with multiple redundancy and safety features, according to the VSSC.

Of the three propulsion stages of the GSLV Mk-III, the second stage uses liquid propellant while the third is a cryogenic stage.

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