

Thaxted Astronomical Society

News

Features

NF0071

SpaceX To Test Fly

Starship Rocket Prototype

<https://www.dailymail.co.uk/sciencetech/article-8511867/SpaceX-set-fly-Starship-rocket-prototype-nearly-500-feet-air-week.html>

SpaceX set to fly its Starship rocket prototype nearly 500 feet into the air next week- but some say it is 'too soon'

Daily Mail 10th July 2020 >

- **A road closure filing reveals SpaceX is set to test fly its Starship prototype**
- **The filing states the area around its Texas site will be closed July 13-15**
- **This will be the first 'hop' for the rocket which is set to be 492 feet into the air**
- **However, all of the four previous prototypes have exploded during ground tests**

Elon Musk plans to send humans to Mars aboard SpaceX's Starship rocket – and that dream may soon come true.

A road closure filing around the firm's Texas facility reveals that the Starship prototype SN5 will fly nearly 500 feet into the air sometime between July 13 and 15.

However, the first flight of the SN5 depends on testing of the Raptor engine, which is scheduled for Monday.

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The news follows a number of failed Starship tests, as Musk has watched four of the Mars-bound rockets burst into flames at the launch site.

According to Teslarati, the Raptor engine is set to go through testing on July 13 and if everything looks good, it will be strapped to the Starship for a 492-foot flight three days later.

SN5 left the rocket factory in June for the testing site in Boca Chica, Texas – less than a month after the fourth prototype exploded.

And many people have mixed emotions about the Starship flight.

Users on Twitter have shared they believe it is too soon, as predecessors of the SN5 have been destroyed in ground tests.

While others cannot wait to see the SpaceX craft take flight.

The massive rocket is SpaceX's planned next-generation fully reusable launch vehicle, the center of Musk's ambitions to make human space travel affordable.

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Musk envisions the Starship will operate much like a commercial airliner by transporting paying customers to the surface of the Moon and Mars.

Musk previously said the lifetime of each Starship will be around 20 to 30 years, 'like an aircraft'.

Around three Starship flights will launch from Earth per day, or around 1,000 flights a year, and each will have a capacity of more than 90,000 pounds.

By continuously ferrying people the 180 million miles to Mars, Musk is predicting 1,000 human inhabitants by 2030 and 'maybe around' one million by 2050.

However, if SpaceX's track record continues down the same path, the billionaire may never get the change to colonize Mars.

In May, the prototype Serial Number 4 vanished into a fireball at SpaceX's site in Texas shortly the engine was ignited for a pressurized test.

The SN4 had passed several important milestones during development, including a pressurization test that had foiled previous models

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The first rocket was tested in 2019, Mk1 prototype, but was engulfed in flames during a cryogenic pressure test.

The second rocket, dubbed Serial Number 1 (SN1), fell victim to another pressure test when it failed to contain its liquid nitrogen.

However, this time the stainless steel cylinder flew off the stand and came down crashing .

And the third time SpaceX saw its third catastrophic failure was in April - again the Starship prototype imploded during the cryogenic pressure test.

The rocket launch has now been rescheduled for 3:22pm Saturday,

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SPACEFLIGHT ACTIVITY BEACH CLOSURE REQUEST

Date/Time Request Submitted: 07.06.2020 / 2:55 PM

Launch Operator: SpaceX

Launch Name/Designation: SN5 150m Launch

Launch Operator POC Contact Info (Name/Phone/Email):

Alma Walzer Santos

Primary Closure Date: July 13, 2020

Launch Window: N/A

Beach closure start time: 8 AM Anticipated end time: 5 PM

Backup Closure Date 1: July 14, 2020

Launch Window: N/A

Beach closure start time: 8 AM Anticipated end time: 5 PM

Backup Closure Date 2: July 15, 2020

Launch Window: N/A

Beach closure start time: 8 AM Anticipated end time: 5 PM

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WHAT IS ELON MUSK'S 'BFR'?

The BFR (Big F***ing Rocket), now known as Starship, will complete all missions and is smaller than the ones Musk announced in 2016.

The SpaceX CEO said the rocket would take its first trip to the red planet in 2022, carrying only cargo, followed by a manned mission in 2024 and claimed other SpaceX's products would be 'cannibalised' to pay for it.

The rocket would be partially reusable and capable of flight directly from Earth to Mars.

Once built, Musk believes the rocket could be used for travel on Earth - saying that passengers would be able to get anywhere in under an hour.

<https://www.dailymail.co.uk/scien>

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X

next week-

Los Angeles 32 mins
New York 29 mins
Cape Town 34 mins
London
Hong Kong 34 mins

The same vehicle will also be able to make the journey to the Moon and then to Mars - unmanned missions in 2022 followed by manned missions in 2024

It has the capacity to transport 100 people in 40 cabins and features large communal areas

It can carry 150 tons of cargo and be used to deliver satellites into orbit

Legs will deploy for a vertical landing

Raptor engines

Central storage, galley and solar storm shelter

Fuel tanks

Delta wing

Without any friction from the air or the weather, the rocket is able to travel at up to **18,000mph** miles per hour

Graphical by John Lawson

The Space X rocket code-named 'BFR' will take off vertically, powered by 37 so-called 'raptor' engines - 31 on the booster rocket and six on the space craft itself

Once the BFR has broken through the earth's atmosphere, its booster rocket will detach and power itself back down to earth where it will land

Booster rocket

348ft

363ft

Its payload is even higher than the Saturn V, right, which took people to the moon in 1969 and could carry 135 tonnes

A Boeing 787 Dreamliner can fly 290 people up to 9,782 miles at a top speed of 678mph

Life on Mars: Illustration of craft on Mars