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CHINA DAILY

香港版
HONG KONG

WEDNESDAY, July 5, 2023

中國日報

www.chinadailyhk.com HK \$10

Private firm to launch rocket in 2024

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Space Pioneer, a Beijing-based private rocket maker, plans to carry out the debut launch of its TL-3 carrier rocket in 2024. The company said it hopes the model will become the backbone of China's commercial space launch market.

"The TL-3's research and development started at the end of 2021.

We have completed its design work and have begun to build some components. The model's maiden flight is scheduled to take place in the first half of 2024 at its own service tower at the Jiuquan Satellite Launch Center (in northwestern China)," Kang Yonglai, founder and chairman of Space Pioneer, told China Daily in an exclusive interview.

If the launch succeeds, Space Pioneer will arrange another two TL-3 launches in the second half of next year, Kang said, adding that his company will launch 12 TL-3 rockets in 2025 if everything goes according to plan.

"The TL-3 will be able to send



spacecraft with a combined weight of more than 10 metric tons into various types of orbit. It is fit for deploying large satellites or a large number of small satellites on a single mission. The rocket will become the pillar of the country's commercial launch market," Kang said.

According to Space Pioneer, the TL-3 (seen in an artist's impression) will be 71 meters tall, with a diameter of 3.8 meters. With a liftoff weight of 590 tons and a thrust of 770 tons, the rocket will be capable of sending satellites with a combined weight of 14 tons into a typical sun-synchronous orbit at an altitude of 500 kilometers, or putting a spacecraft weighing 17 tons into a low-Earth orbit.

The model will ultimately have two variants — the TL-3H and TL-3M. The TL-3H will be 88 meters tall and have two side boosters, and be so powerful that



Kang Yonglai

it will be able to deploy up to 68 tons of payload into a low-Earth orbit or 42 tons into a 500-km sun-synchronous orbit. The TL-3M is a further

istic concept of a rocket-launched intercontinental space plane.

Space Pioneer is the first and only private company in China that has reached orbit with a liquid-fuel rocket — with the first flight of its TL-2 rocket in April at the Jiuquan center.

The TL-2's April mission marked the first time a privately developed, liquid-propellant carrier rocket succeeded in its first orbital attempt, a powered flight that places a craft into orbit in outer space.

Before the TL-2, all liquid-propellant rocket types developed by private enterprises, including SpaceX, Virgin Orbit and China's LandSpace, had failed on their first flight attempt.