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NK's 2nd spy satellite launch fails despite Russia's alleged support

Pyongyang unlikely to attempt next launch soon: Seoul officials

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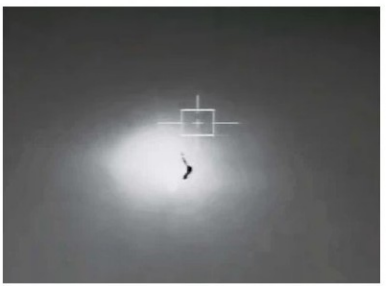

This footage shows the explosion of North Korea's military reconnaissance satellite launched on Monday night, captured by surveillance equipment on a South Korean naval vessel.

Courtesy of South Korean Joint Chiefs of Staff

North Korea's latest attempt to launch its second military spy satellite into orbit ended in failure, with analysts attributing the setback to a new type of rocket engine possibly introduced with Russian assistance.

While this failure is expected to deal a significant blow to Kim Jong-un's ambitions of deploying multiple spy satellites to monitor its enemies, some observers suggest that this may even strain his partnership with Russia.

The South Korean military detected a suspected satellite-carrying rocket being launched southward over the West Sea from the Tongchang-ri space station at around 10:44 p.m. on Monday, according to Seoul's Joint Chiefs of Staff (JCS).

However, the rocket exploded midair shortly after takeoff, with multiple pieces of debris detected in North Korean waters two minutes after the launch, the JCS said in a text message to reporters.

North Korea promptly acknowledged the failure.

"The launch failed due to the air blast of the new-type satellite carrier rocket during the first-stage flight," the North's state media Korean Central News Agency (KCNA) reported approximately an hour and a half after the rocket's launch.

The KCNA also stated that a preliminary conclusion made by the state-run aerospace agency attributed the failed launch to a new "liquid oxygen plus petroleum engine."

This marks Pyongyang's third failure to send up a reconnaissance satellite. North Korea successfully launched its first satellite, Malligyong-1, into orbit in November 2023 after two failed attempts, first in May that year and then in August.

Analysts viewed that the new engine, a type never utilized by Pyongyang in previous rocket launches, appeared to have been introduced based on advice from Russia.

Chang Young-keun, head of the missile center at the Korea Research Institute for National Strategy, stated that North Korea employed a new engine using kerosene — referred to by North Korea as petroleum — combined with liquid oxygen.

"This combination is known for generating high specific impulses and producing high thrust per unit of fuel, and it is also used in South Korea's Nuri rocket and SpaceX's Falcon rockets in the United States," Chang said.

"To utilize the cryogenic oxidizer liquid oxygen, it must be maintained at minus 183 degrees Celsius before launch … Developing related systems would take at least a couple of years," he added.

Given the unlikelihood of North Korea developing the new engine in a short period, a more plausible explanation would be that it acquired the technology from Russia and conducted several ground engine tests before Monday's launch, the researcher speculated.

During the North Korean leader's summit with Russian President Vladimir Putin at Russia's space center in September last year, the latter pledged to assist Pyongyang in modernizing its satellite technology.

"Many other satellite launches supported or advised by Russia mostly use kerosene propellant systems. It is possible that Pyongyang has received advice from Russian technicians to use the kerosene propellant system, which is a safer option in the long term," said Hong Min, a senior research fellow at the Korea Institute for National Unification.

Some critics suggested that the technical glitch resulted from hasty preparation.

Monday's satellite launch was seen as an attention-grabbing political maneuver by the North, as it came just hours after leaders of South Korea, China and Japan held a rare trilateral summit in Seoul, a development that Pyongyang might have found unsettling.

South Korean officials speculate that it would take some time for Pyongyang to make another launch attempt.

"Unlike the first launch failure (last year), which was followed by a clear announcement of the next attempt within days, this time the North has only provided a preliminary conclusion. It is anticipated that a considerable amount of time will be required for them to conduct a thorough assessment and for the next attempt to take place," a JCS official told reporters on condition of anonymity, Tuesday.

Yang Moo-jin, the president of the University of North Korean Studies, suggested that the latest failure could be a bigger embarrassment for the Kim regime than previous ones, potentially affecting burgeoning ties between Pyongyang and Moscow.

"This could deal a blow to Russia's pride in its space technology, with the possibility of blame-shifting between North Korea and Russia regarding technical advice and cooperation," Yang said.

However, Hong of the Unification Institute believes otherwise.

Hong said, "Russia may now provide more active and concrete technical support to increase the success rate, as it may seek to maximize visible progress through its technical support before Putin's planned visit to Pyongyang."