



North Korea bought black market rocket engines, study says

Zachary Cohen

August 14, 2017

North Korea may have used illicit trade networks to purchase powerful rocket engines once produced by a Ukrainian factory that was instrumental to the Soviet missile program -- a claim that could help explain the surprising leap forward in long-range missile capability demonstrated by the rogue nation in recent months, according to new analysis from the International Institute for Strategic Studies.

Pyongyang's mysteriously rapid development of an intercontinental ballistic missile -- particularly after a string of failed intermediate-range flight tests in 2016 -- has exceeded the expectations of US intelligence agencies, and evidence outlined in the global security think tank's analysis suggests North Korea might be buying advanced propulsion technology for their Hwasong-14 and Hwasong-12 rockets from Russian or Ukrainian black markets.

"It appears that they have sourced an engine from a foreign entity, and they have successfully incorporated that engine into some missile bodies and have successfully tested both an intermediate range and an intercontinental range missile, in May and July," Michael Elleman, a missile expert and author of the study, told CNN on Monday.

Elleman's analysis -- which was first reported by The New York Times -- indicates that the modified high-performance liquid-propellant engine used during successful launches of intermediate and intercontinental range missiles in recent months is based on technology developed by the Soviet Union.

"It could be a source in Ukraine," Elleman said. "It could also be from Russian entities; these engines are known to be stored in several sites,"

"We know the modified version, which we've seen on the North Korean missiles, that has actually been seen in Ukraine," he added. "It doesn't mean that it doesn't exist in Russia, it's just that we've seen it there -- so that's the most likely source."

The state-owned Ukrainian aerospace company Yuzhmash denied claims made in the report that one of its factories is the "most likely source" of liquid-propellant engines used by North Korea in its missiles.

In a statement, Yuzhmash said: "The facts, which are stated in the publication, do not correspond to reality. In particular, Yuzhmash not only is not the main producer of missiles for the Russian Federation, but does not supply missiles, their parts and assembly units, including rocket engines."

The Ukrainian presidential office also pushed back on the report, telling CNN that it sees these claims as a Russian effort to prevent the US from supplying Ukraine with advanced javelin anti-tank rockets as US considers lethal arms aid.

Elleman told CNN that he does not think the Ukrainian government was involved and noted it is difficult to link any possible illicit activity to executives at Yuzhmash, as "there are a lot of corrupt networks of people" that may have had access to storage facilities.

"Remember where the Yuzhmash factory is -- it is not far from the front lines of the battle between Ukraine and Russian proxy forces in the eastern portion of the country," Elleman said. "So there are certainly pathways for things to disappear from various factories of storage locations."

If true, Elleman's findings could prove significant, as President Donald Trump's administration has focused on Chinese-linked entities as the primary sources of economic and technological support for North Korea.

US National Security Council spokesman Marc Raimondi told CNN that the White House is "aware of the IISS report and the media coverage on it."

"Any notion that the United States and our allies are not fully engaged in disrupting and confronting North Korea's ICBM and nuclear ambitions are misguided and ill-informed," he said in a written statement to CNN.

Other analysts suggest that it is plausible that the engines used by North Korea during recent missile tests were acquired from entities previously associated with the Soviet Union's missile program, and the idea that Pyongyang purchased the technology from illicit channels could help answer questions surrounding its unprecedented rate of success.

Doug Bandow, a senior fellow at the Cato Institute, told CNN that the claims merit a pretty serious investigation, and if they are proven true, the US must identify and close off these channels.

"The US was surprised by North Korea's recent progress, and this could explain it," he said, adding that the US needs to reach out to the Ukrainian government to assess whether a transfer did come from sources within the company in question and take steps to ensure it does not happen again.

In addition to closing off possible black market channels providing missile technology to North Korea, an investigation is crucial to determining whether Pyongyang might have purchased the rocket engines themselves or if they were able to acquire technology that would allow for continued production, according to Bruce Bennett, a defense researcher at the RAND Corporation.

"If they acquired the ability to produce the engines, that's a very different situation than buying the engines themselves," Bennett told CNN.

While purchasing a supply of the boosters would have pushed North Korea's missile program several years ahead of schedule, it is unlikely they would be able to reverse-engineer that technology in the short term, meaning each test launch would require them to dip into a limited inventory, according to Bennett.

Having a limited supply of effective engines, coupled with evidence that suggests North Korea still has not solved all the technical difficulties associated with developing a reliable ICBM, could provide an incentive that the US could leverage to pressure Kim Jong Un to come to the negotiating table, he added.

Identifying the factors contributing to the success demonstrated by North Korea's recent missile launches could also provide clues that would allow US officials to better project the capabilities of Pyongyang's missile arsenal, Elleman told CNN.

"The existing Hwasong-14 is probably a year away and needs to undergo several more flight tests to establish some sense of reliability, accuracy, prove that reentry technology's work, things of that nature," Elleman said. "The West Coast could be under threat as soon as next year, but I think in the longer term it's going to be several years before they can target the entire United States," he added.