

Highlights of the DPRK Military Parade on 14 January 2021

published by [Xu Tianran](#) on Jan 18, 2021

A military parade was held in Pyongyang in the late hours of Thursday, 14 January 2021, to celebrate the conclusion of the 8th Congress of the Workers' Party of Korea (WPK). The parade was basically a scaled down version of the 10 October 2020 parade in celebration of the 75th anniversary of the founding of the WPK. The Hwasong series liquid propellant strategic missiles were not included in this latest parade. However, two missiles were displayed for the first time. This short article identifies the military hardware displayed during the parade and provides a detailed description of the two new missiles.

Military equipment

The following equipment [1] was displayed during the 14 January 2021 parade:

- Two types of self-propelled anti-tank missiles (two formations)
- Self-propelled guns with unmanned turret (one formation)
- Prototype tanks (one formation)
- Self-propelled howitzers (one formation)
- ~300 mm and ~600 mm caliber multiple rocket launchers (three formations)
- Pukguksong-5 submarine launched ballistic missiles (SLBM), displayed for the first time (one formation)
- Suspected short range air defense missiles (one formation)
- Suspected long range air defense missiles, possibly KN-06 (The "KN-XX" is the US government designation as the missile's official name has not been confirmed. One formation)
- Suspected land attack cruise missiles (one formation)
- KN-23 and KN-24 short range ballistic missiles (two formations)
- Short- to medium-range ballistic missiles, displayed for the first time (one formation)

With the exception of two previously undisplayed missiles (the Pukguksong-5 SLBM and the new type of short- to medium-range ballistic missile), images of all of the military hardware showcased during the recent parade can be seen in ONN's missile viewbook [2] for the 10 October 2020 military parade.

Two new missiles

Pukguksong-5 SLBM

The most obvious difference between the Pukguksong-4 (only displayed during the 10 October 2020 parade) and the Pukguksong-5 is that the latter is visibly longer. Both missiles are carried by the same type of display trailer. However, while the trailer carrying the Pukguksong-4 had sufficient space for seats for soldiers (as seen in the image below), there is no such space on the trailer carrying the Pukguksong-5 due to the lengthened body and payload fairing of the missile.



Pukguksong-4 during 10 October 2020 parade (left) and Pukguksong-5 during 14 January 2021 parade (right). The yellow boxes highlight the space between the missiles and the trailers, which, as indicated by the two green lines, suggest that the Pukguksong-5 is placed at a slightly more elevated position than the Pukguksong-4, possibly due to its lengthened body. The red lines show the height difference between the missiles and the tops of the truck cabins. In general, there appears to be no significant increase in diameter for the Pukguksong-5. Source: KCNA

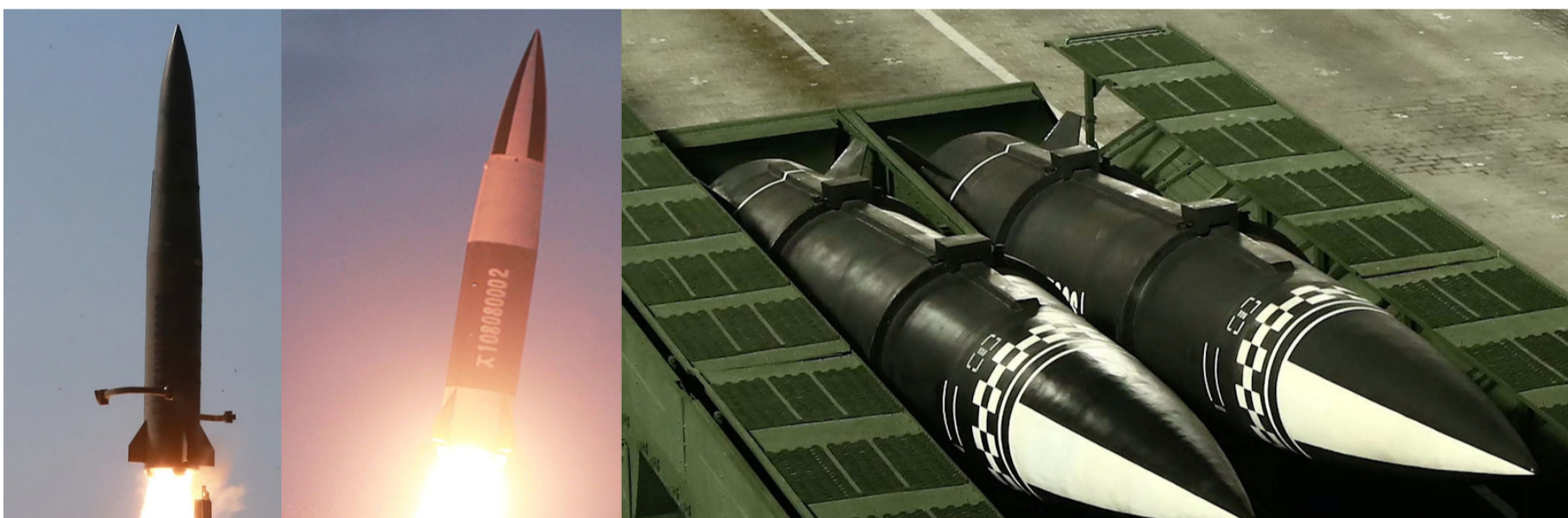
Both the Pukguksong-4 and the Pukguksong-5 are of a two-stage solid fuel design, although the possibility that a third stage motor may be placed inside the payload fairing cannot be completely ruled out. Neither missiles have been flight tested; both are generally similar in design to the Pukguksong-3, [3] which has only been flight tested once (in October 2019), according to publicly available information.

Short- to medium-range ballistic missile

This new solid fuel ballistic missile shares some similarities with the KN-23 [4] and KN-24. [5] However, the new missile is distinguishable by its five-axle truck. By contrast, the KN-23's truck has four axles (the shorter KN-24 is carried by a tracked chassis). This suggests that the new missile is longer and thus heavier than the KN-23.



KN-23 (left) and the new solid fuel ballistic missile carried by a lengthened KN-23 truck (right). The truck cabin has also been modified. Source: KCNA



Left to right: KN-23, KN-24 and the new missiles revealed in the parade. While in general the new missiles appeared to be a lengthened KN-23, the nose cone section is more similar to that of a KN-24. Source: KCNA

The KN-23 and KN-24 ballistic missiles meet the criteria for a hypersonic weapon in that they reportedly are maneuverable [6] and have reached a top speed above Mach 6. [7] It is reasonable to assume that the new missile has a similar flight profile and likely the longest range of the three types of missiles. It is uncertain whether the DPRK will deploy all three missiles, or if there will be a selection process in the future. According to a summary of the report delivered by Kim Jong Un during the 8th WPK Congress, [8] the three types could all be nuclear capable.

[1] The list is arranged in the order of their appearance during the parade.

[2] Viewbook available at: <https://www.oneearthfuture.org/program/open-nuclear-network/publications/viewbook-dprk-10-october-2020-parade>

[3] Estimates of the Pukguksong-3's range by members of the UN Security Council vary from 1,700 to 2,500 km. UN Security Council Report S/2020/151, available at: https://www.securitycouncilreport.org/atf/cf/%7B65BF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/S_2020_151.pdf

[4] A total of eight KN-23 short range ballistic missiles have been fired in four launch activities carried out between May 2019 to August 2019. The missile exhibited a range of about 600 km.

[5] The KN-24 short range ballistic missile has been tested three times with a total of six missiles launched between 10 August 2019 to March 2020. It exhibited a range of about 400 km.

[6] N. Korea fires 2 unidentified projectiles into East Sea: JCS, Yonhap News Agency, 16 August 2019, available at: <https://en.yna.co.kr/view/AEN20200322000552325?section=nk/nk>

[7] N.K. says leader Kim oversaw test of newly developed tactical guided weapon, Yonhap News Agency, 22 March 2020, available at: <https://en.yna.co.kr/view/AEN20190816001354325?section=national/defense>

[8] "The national defence science sector...proceeded to develop ultra-modern tactical nuclear weapons including new-type tactical rockets...." See: On Report Made by Supreme Leader Kim Jong Un at Eighth Congress of WPK, KCNA, 9 January 2021.

