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DIRECTORATE OF INTELLIGENCE

15 OCTOBER 1985

North Korea: New Weapons in the Military Forces

Summary

North Korea continues to add new and improved weapons and equipment as force modernization progresses. An improved relationship with Moscow has allowed P'yongyang to begin receiving weapons systems of a technological level heretofore unavailable from China or domestic production. This year the Soviets are providing MIG-23 fighters and SA-3 surface-to-air missiles. Although we have not yet confirmed the source of a limited number of Scud surface-to-surface missiles now in North Korea, the Soviets designed and produced this weapon. Moscow certainly approved the shipment of over 100 Soviet-designed, Polish-built MI-2 helicopters between 1980 and 1984.

Beijing continues to provide at least technical assistance to P'yongyang. We believe that the Chinese are aiding the North in establishing domestic jet fighter production, and that an aircraft soon to enter prototype assembly or production will be a copy of the Chinese F-7, an improved variant of the early model Soviet MIG-21. China also appears to be aiding North Korean efforts

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to develop an air-launched antiship missile and a mobile missile for coastal defense.

Domestic weapons development continues as the North Koreans use rather ingenious methods to design and produce systems using highly modified mixes of Soviet and Chinese weapons and equipment. A self-propelled, radar-controlled, antiaircraft gun system, and an infantry fighting vehicle are the latest to be readied for deployment as part of North Korea's growing ground forces mechanization program.

25X1 P'yongyang is intent on fielding a new tank or improved version of the T-55 or T-62 tanks that have been produced in North Korea. 25X1

All of the new weapons are rather dated technology, but they represent an improvement over equipment currently in use and help correct weaknesses, particularly those in the air and mechanized forces. Major improvements in weapons quality shall depend on outside supplies, but the trend toward closer relations with Moscow suggests that the Soviets may offer a wider variety of weapons in the future. We do not know, however, just how far Moscow might go in providing weapons, nor what the Soviets might demand in return.

Soviet Weapons Supply

This year the USSR began providing North Korea with MIG-23 fighters and SA-3 surface-to-air missiles. These deliveries represent the first supply of major weapons by the Soviets in over 10 years. The MIG-23 and particularly the SA-3 are dated in design, but they provide P'yongyang with weapons with qualities heretofore unavailable that will significantly upgrade the capabilities in the North's air and air defense forces.

The MIG-23s are the first combat aircraft delivered by the Soviets since 1974, and the first relatively modern fighters introduced into North Korea in over 20 years.* We believe that the Flogger-G variant now in the North has the same avionics and weapons packages that are standard on Flogger-Gs in the Soviet forces and include the AA-7 Apex missile.

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*All photos are attached at the end of this memorandum.

The MIG-23 - Apex combination would give the North its first, true all-weather fighter-interceptor, and the only aircraft equipped with all-aspect missiles. Both the infrared and radar guided versions of the Apex can be used in nearly all angles of attack at medium altitudes against opposing aircraft. Other North Korean fighters with older infrared Atolls are limited to missile attacks from the rear quadrant. The radar-homing Apex gives the MIG-23 an all-weather capability unmatched by other North Korean fighters, most of which are clear-weather, daylight-only fighter-interceptors.

There are 26 MIG-23s in North Korea now, and we believe that Moscow will provide at least enough aircraft to fill out a fighter regiment of 35-40 aircraft. If current delivery rates are maintained, we expect a full regiment by the end of this year or early 1986. It probably would take six months to a year before the full regiment was operational and fully integrated into the North's air defense system.

Missiles. Although of 1950s design, the SA-3 is still deployed in the USSR and widely used elsewhere. It will significantly upgrade the North's low-altitude air defenses, which up to now depended on large numbers of antiaircraft guns and hand-held missiles. The SA-3 will augment the widely deployed SA-2, which provides medium-to-high altitude protection.

The SA-3 is not yet operationally deployed, and we do not know how widely it will be based. Initially, the system probably will be used for defense around the capital. Deployment at other important point targets and perhaps in a barrier defense along the coasts and the Demilitarized Zone could follow, but this depends on the number the Soviets are willing to supply.

Another weapon of Soviet design now found in limited quantity in North Korea is the Scud surface-to-surface missile. We are not sure who provided the first Scuds, and North Korea may now be producing it in small numbers through reverse engineering. The 300-kilometer range of the Scud would give the North the capability to strike large, fixed targets deep in South Korea.

Helicopters. The Soviets apparently approved Poland's delivery of helicopters and assistance to P'yongyang in the production of MI-2 Hoplites [redacted] 25X1

25X1 [redacted] Warsaw also supplied over 100 of the Soviet-designed MI-2s between 1980 and 1984. Another major upgrade took place when P'yongyang illegally acquired 86 US Hughes 500 helicopters in 1983 and 1984.

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Chinese Technical Assistance

China probably is assisting the North in establishing a jet fighter industry. 25X1 25X1 Production or assembly could be in the early stages by late this year or early in 1986. We believe that the aircraft produced will be a copy of the Chinese F-7, 40 of which were supplied to North Korea in 1982:

-- We do not believe that P'yongyang would invest so much time, effort and money to construct facilities for the production of a fighter any less sophisticated than the F-7.

-- Production of the F-7 appears to be within North Korean technical capabilities, particularly with Chinese assistance.

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Projecting production rates for a fighter not yet seen even in prototype in a country never before engaged in jet aircraft manufacture is difficult at best. 25X1

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25X1 If North Korea achieves a rate of series production for 40 fighters per year, it would be doing well compared to other small countries engaged in aircraft manufacture or assembly.

We believe that limited assembly will precede manufacture, which will start slowly and perhaps reach 20 aircraft per year by about 1989. If Chinese assistance is sufficient to allow the North to overcome early production problems, the rate might reach 40 aircraft a year as early as 1988.

Missile Programs. China also appears to be aiding in the development of two other weapons systems--air-to-surface and surface-to-surface missiles. Both are designed for use against ships.

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If the North Koreans succeed in mating Styx with the IL-28, P'yongyang will add a more flexible antishipping weapon that still will be of limited effectiveness. The IL-28 could launch missiles outside the effective range of ship-borne antiaircraft weapons, but the surface-search capabilities of the aircraft would be extremely limited, and both Styx and the IL-28 are susceptible to electronics countermeasures.

The Chinese appear to have at least influenced North Korean development of a mobile coastal defense missile system. P'yongyang has fielded a tracked launch vehicle equipped with the Chinese-designed Silkworm antiship missile. The system is nearly identical to that deployed in China, except that the Koreans use a different vehicle--the much used chassis developed for the North Korean M-1973 armored personnel carrier. The mobility provided by a tracked launcher improves the North's flexibility in employing coastal defense missiles.

Domestic Weapons Development

For over 10 years, North Korea has relied exclusively on domestic production to supply the armored vehicles used in its continuing mechanization program. With the exception of tanks, all of the armored vehicles--ranging from APCs through a variety of self-propelled weapons--are highly modified derivations or indigenously fabricated mixes of vehicles and weapons originally designed by the Chinese or the Soviets.

Definitive data on the characteristics of many of the North's armored vehicles have been difficult to obtain. P'yongyang does not parade the vehicles, and did not export any until recently. In 1984, the North exported its domestically produced armored personnel carrier to Zimbabwe, and this year publicity about the deal provided information on APC armament that we were unable to confirm in the previous 12 years of production. Newspaper photos show that the basic APC is equipped with two turret-mounted guns--probably 14.5-mm ZPU-2 heavy machine guns. With its high rate of fire--600 rounds per minute per gun--and a tactical antiaircraft range of 1,400 meters, the APC can provide some protection for mechanized forces against light helicopters.

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Somewhat better protection against aircraft should be available soon when the new self-propelled antiaircraft machine gun system (M-1983) is fielded. This system uses a T-62 medium tank chassis, a modified Drum Tilt fire control radar, and probably the four-barrel version (ZPU-4) of the 14.5-mm machine gun. This weapon system appears to be in the final stages of testing prior to operational deployment.

Both the chassis and radar on the M-1983 have capabilities beyond what we consider necessary for use with a machine-gun system. The tank chassis is extremely heavy, and the radar has acquisition potential well beyond the range of the guns. P'yongyang may later attempt to mate larger and more effective guns with the Drum Tilt radar--T-62 chassis combination. The four-barrel 23-mm guns used on the Soviet ZSU-23-4 self-propelled antiaircraft system and seen in North Korea in twin-barrel, towed versions, or the twin-30-mm guns used with Drum Tilt on North Korean naval craft appear to be likely candidates for future use.

An infantry fighting vehicle--a highly modified variant of the basic M-1973 APC--entered series production in 1984. This vehicle is 0.6 meters longer than the standard APC, uses a larger turret similar to that on the PT-76 light tank, and mounts what appears to be a light cannon with a caliber of 30-to-37-mm. The IFV probably will join the North's mechanized forces soon, and eventaully could replace the APC. A cannon-armed IFV would have much greater destructive power than the APC with its machine guns and could be highly effective in combat against lightly armored vehicles.

Implications

All of the new weapons are of rather dated technology, but each represents an improvement over equipment currently in use in North Korea, particularly by the North's air and mechanized forces. P'yongyang's long-standing need for modern fighters is

being at least in part remedied by a reversal in the Soviet attitude toward supplying weapons. Significant change, however, will remain dependent on Soviet willingness to continue to supply air and air defense weapons. We do not know how many MIG-23s Moscow will supply, nor if the USSR will provide a more modern fighter in the future.

Soviet supplied weapons could have much broader implications--particularly for the future of the North's ground forces. Rumors persist that the USSR will supply such weapons as the T-72 tank, modern antitank missiles, and mobile surface-to-air missiles. These weapons would increase the capabilities of North Korea's already large and potent ground forces far beyond improvements we expect from the North's domestic research, development, and production efforts.

We do not know, however, just how far the Soviets are willing to go in providing weapons to P'yongyang, nor what they would demand in return. Moscow may believe that such deliveries eventually could lead to air and naval access to bases in North Korea. For its part, however, P'yongyang likely would resist giving up territorial concessions that would look like ceding sovereignty to the USSR. The North might, however, be willing to increase its support for Soviet policies at the expense of P'yongyang's relationship with Beijing.

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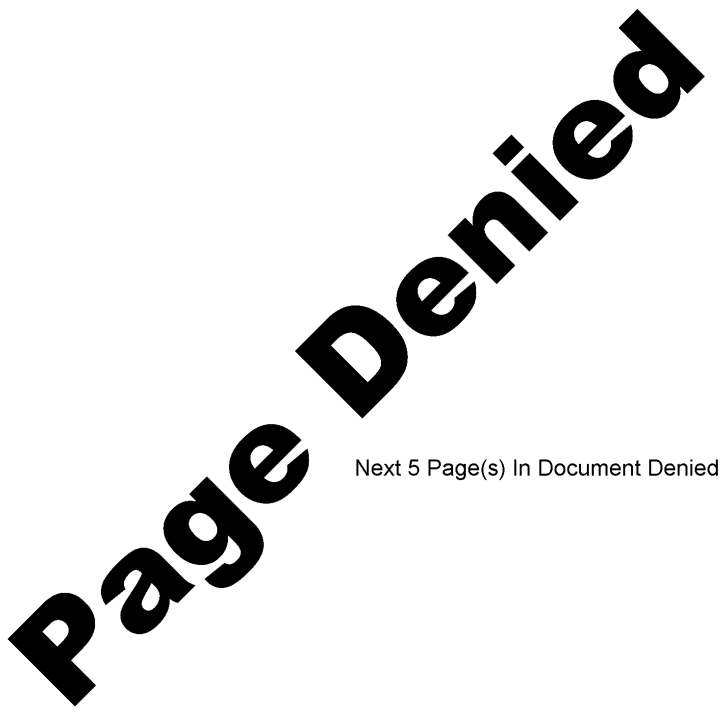

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North Korean-Produced Armored Personnel Carriers
Harare, Zimbabwe
April 1985

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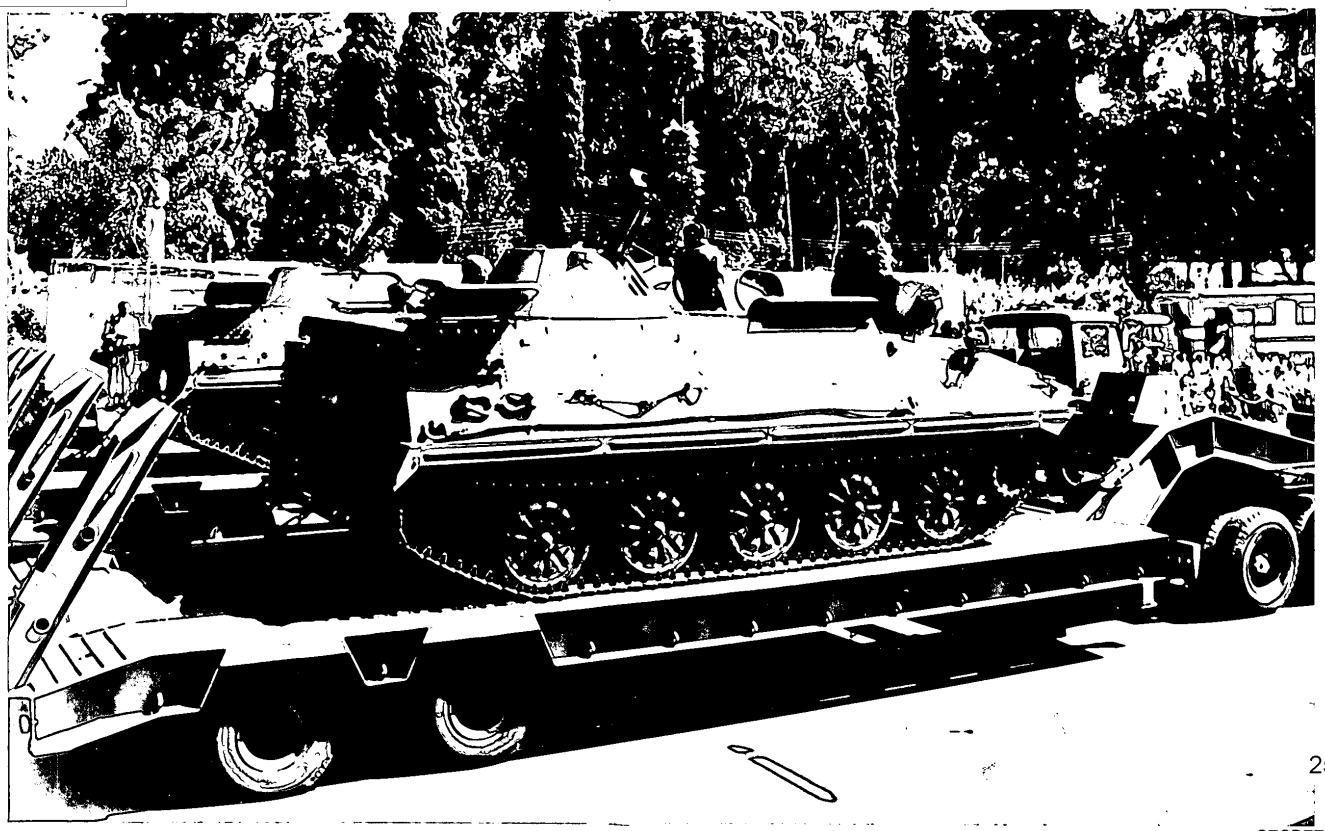

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