

Arms and Ammunition Tracing Desk Report

Human Security Baseline Assessment (HSBA)
for Sudan and South Sudan



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SPLA-N weapons and equipment, South Kordofan, December 2012

This report documents weapons and equipment photographed in December 2012 during a reporting trip to the area of South Kordofan/Nuba Mountains controlled by the Sudan People's Liberation Army-North (SPLA-N). The photographs, most showing captured Sudanese government weapons, provide new insights into the military capabilities of both sides of the South Kordofan conflict.

The long-running conflict in South Kordofan reignited in June 2011, one month before the official secession of South Sudan. SPLA-N rapidly gained control over a larger territory than the rebel movement held in the previous war. One of the conflict's primary fronts is around Kadugli, the state capital. Since the beginning of the war, the rebels have maintained positions within physical eyesight of Kadugli on multiple sides.

On 10 December 2012, the Sudan Armed Forces (SAF), together with a smaller contingent of the paramilitary Popular Defense Forces (PDF), attacked the SPLA-N at Daldoko, one of the SPLA-N positions a few kilometers outside of Kadugli. Overrunning Daldoko would give the Sudanese government road access into the heart of the SPLA-N controlled Nuba Mountains, making the site a primary strategic location. A diversionary SAF contingent attacked the SPLA-N position directly, while a second, larger SAF group engaged in an evasive flanking maneuver. But SPLA-N ambushed the flanking SAF force and repelled it.

Two days later, the SPLA-N counterattacked on the withdrawn SAF force position, still in the Daldoko vicinity. SAF retreated from that position and suffered heavy casualties. During the battle, the SPLA-N captured three PDF fighters as prisoners of war.

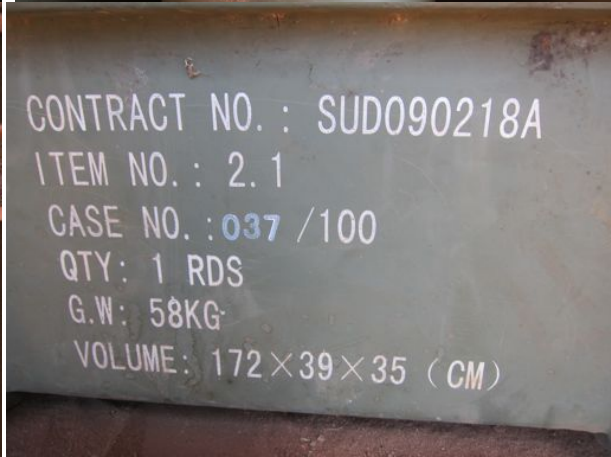
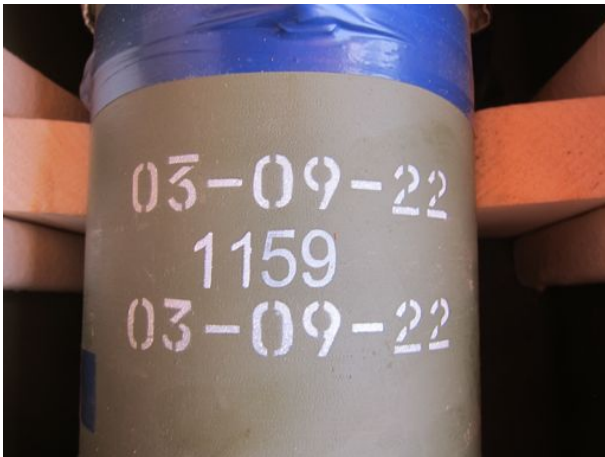
This report was compiled from photographs taken at the SPLA-N command base behind the Daldoko front on 11 December and 15 December; the Daldoko battle site on 15 December; and at a separate SPLA-N headquarters on 16 December. All photographs were taken in the presence of SPLA-N soldiers in rebel-controlled territory.

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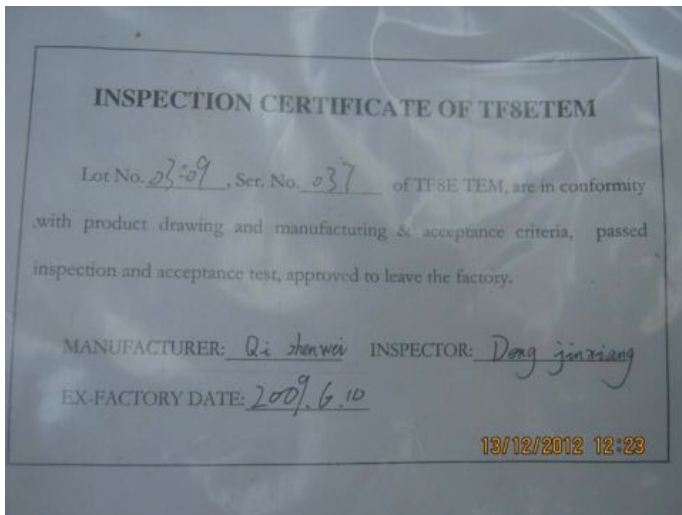
Red Arrow-8 anti-tank guided missiles



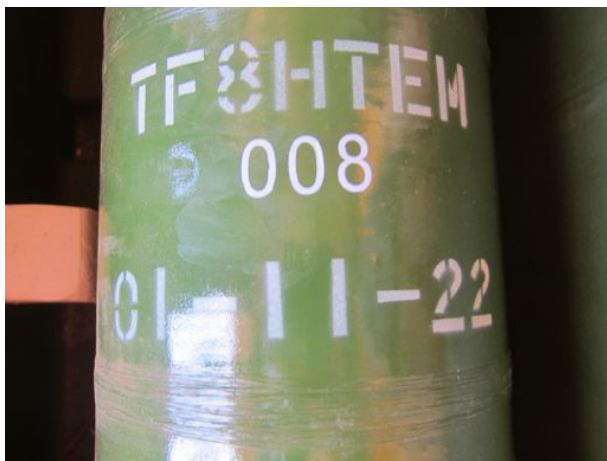
During the battle of Daldoko, the SPLA-N captured a Chinese manufactured TF8ETEM and a TF8HTEM, both variants of the Hongjian-8 (HJ-8), or Red Arrow-8 anti-tank guided missile. A separate guidance unit attaches to the launch tube, and is required to fire the missiles. It is unknown whether the SPLA-N captured a guidance unit. Without one, the missiles are useless. This is the first time the Small Arms Survey has documented an anti-tank guided weapon in Sudan.



The launch tube shown in these images has markings in three areas. The mark '03-09-22' is the lot number, with the '03-09' representing manufacture in March 2009. The contract number on the outside of its packing crate indicates that the contract was signed between China and Sudan in 2009 as part of a total order of 100 missiles (each in a launch tube). Date of delivery is unknown.



The inspection certificate found inside the crate shows that the missile above was the 37th unit in a lot that was manufactured in March 2009. The missile was inspected on 10 June 2009.



The launch tube shown above has markings in three areas. The '01-11' in lot number '01-11-22' indicates manufacture in January 2011. The contract number on the packing crate shows that the contract was signed between China and Sudan in 2009 as part of an order of 350 total missiles. The missile would have been supplied to Sudan sometime between the date of inspection (April 2011) and the date it was photographed (December 2012).

The timing of these two consignments, totaling 450 missiles combined, suggests that Sudan purchased the missiles from China for potential use against the South Sudanese military and its newly procured fleet of tanks, rather than for an internal counter-insurgency against rebel groups.



The inspection certificate found inside the crate reveals that the missile was the 8th unit in a lot that was manufactured in January 2011. The missile was inspected on 20 April 2011.



The missiles were captured inside this truck, which was mounted with a missile launch stand.

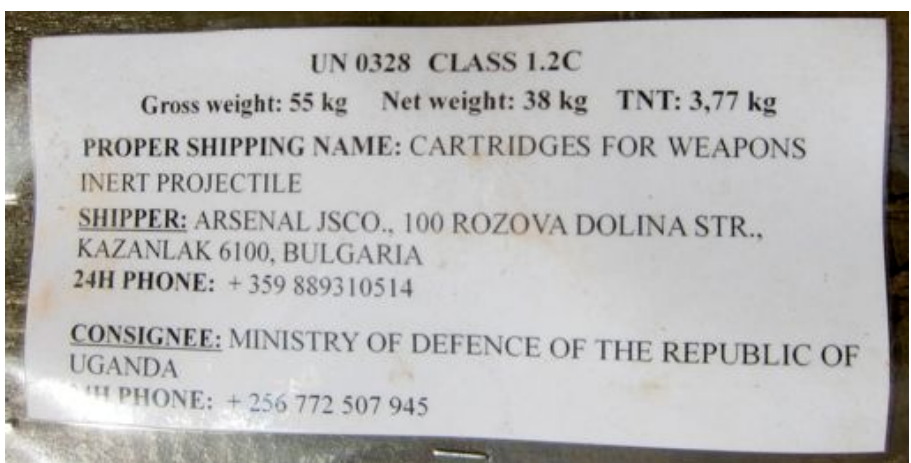
Boxes of 23 x 152B mm anti-aircraft ammunition



These four crates (bottom crate partially visible) of anti-aircraft ammunition were photographed on 11 December 2012 behind the Daldoko front line. After the photographs were taken, SPLA-N soldiers carried the crates out of view into a nearby mud hut.



Markings indicate that the crates contain 84 rounds of 23 x 152B mm ammunition compatible with ZU-23 and ZSU-23-4 anti-aircraft cannons. According to the markings, the ammunition was produced in Bulgaria in 1998.



Labels on the crates indicate they were shipped by the Kazanlak (Bulgaria)-based Arsenal JS Co. to the Ugandan Ministry of Defense. According to Arsenal's website, it sells several types of 23 x 152 mm rounds compatible with the ZU-23-2 and ZSU-23-4. Its website also indicates that these rounds ship in crates of 84 pieces with a gross weight of 55 kg, matching the weight markings on the crates.

All four crates are marked 'UN 0328 Class 1.2C' and 'TNT', with a gross weight of 55 kg and net weight of 38 kg, indicating that all four include the same contents.



Although the ammunition dates back to 1998, the UN package code on the box (above) indicates that the crate was manufactured in 2009 ('09') at the Arsenal ('ARS') plant, suggesting that the ammunition was supplied to the Uganda after 2009.

It is not possible from the crate markings alone to determine how the anti-aircraft ammunition came into the possession of the SPLA-N, nor when. Given the complicated regional relations and recent historical transitions of the region, two scenarios can be considered:

1) Uganda could have supplied the arms directly to the SPLA-N, likely through South Sudanese territory. This would not be inconsistent with Uganda's foreign policy towards Sudan/South Sudan. Uganda regularly hosts SPLA-N leaders. Sudanese political opposition and armed rebel groups recently met in Kampala, Uganda's capital, to sign an alliance. Ugandan President Yoweri Museveni and Sudanese President Omar al Bashir have a longstanding mutual animus.

2) Uganda could have supplied the arms to the Southern SPLA, which then supplied them on its own accord to the SPLA-N. Since the crates appear to have been manufactured in 2009, this transfer could have occurred either prior to or after South Sudan's July 2011 independence. If Uganda supplied the arms to South Sudan before independence, it is possible the anti-aircraft ammunition was part of the SPLA-N's arsenal while it was still part of the SPLA (and not a rebel group), prior to the outbreak of South Kordofan hostilities in June 2011.¹ Given the SPLA's own limited stocks during the interim period, and the SPLA-N's dire need for anti-aircraft munitions in the face of the Sudanese government's tactical air advantage, it is doubtful that the SPLA-N's mid-2011 stock of anti-aircraft ammunition alone was deep enough to last the next 18 months of war. If Uganda supplied South Sudan's SPLA with the ammunition post-independence, and South Sudan then passed it to the SPLA-N, South Sudan would have done so in violation of South Sudanese President Salva Kiir's repeated and insistent public pledge that it had cut all links to the SPLA-N after June 2011.²

60 mm mortar bomb



Sudanese manufactured 60 mm mortar bomb photographed at the SPLA-N base behind the Daldoko front line. The Small Arms Survey documented similar mortars that SAF left behind during the SPLA and JEM attack on Heglig in April 2012.

ZPU-4 cannon



A 14.5 x 114 mm ZPU-4 quad-barrelled cannon at the SPLA-N base behind the Daldoko front lines.

ZU-23-2 cannon



A twin-barrelled ZU-23-2 cannon photographed at the SPLA-N base behind the Daldoko front lines on 15 December. Minutes after the photograph was taken, the SPLA-N used it to open fire on an Antonov flying overhead. The aircraft flew away without dropping any explosives. Some soldiers reported that they saw a puff of smoke around the Antonov. The SPLA-N said that rounds from the ZU-23-2 had hit it, later claiming that the aircraft crashed in the “Western Mountains,” the western pocket of SPLA-N control northwest of Kadugli. This remains unconfirmed.

Box of 7.62 x 39 mm ammunition



This box of 7.62 x 39 mm ammunition was found at the Daldoko battle site on 12 December. The crate and label are consistent with Sudanese packaging, which often contains Chinese produced ammunition. The Small Arms Survey was not able to inspect the contents of this box.

SPG-9 and B-10 recoilless rifles



Four seemingly new SPG-9 recoilless rifles (foreground) and two B-10 recoilless rifles (rear) that the SPLA-N said they seized from SAF in Daldoko. It was not possible to determine the provenance of these weapons.

BRDM-2 Armoured Personnel Carrier

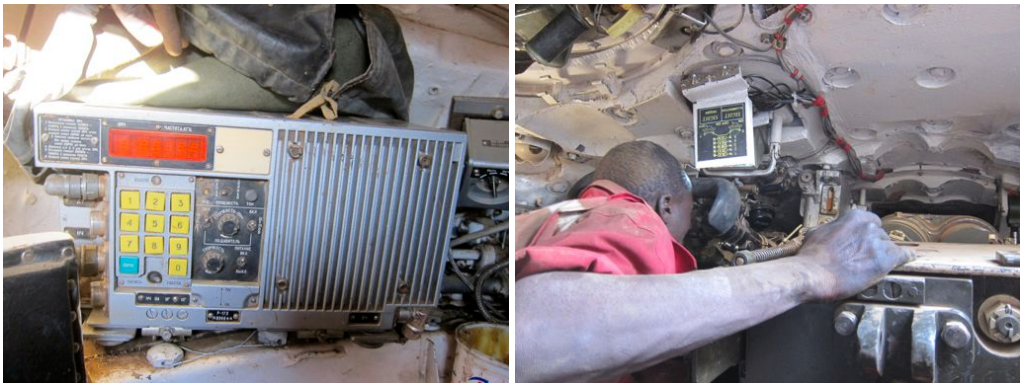


This BRDM-2 APC (front and rear shown) was photographed on 11 December at the SPLA-N base behind the Daldoko front line. The SPLA-N said that they captured it alongside four tanks in their 10 December ambush in Daldoko. The SPLA-N also said it captured another similar APC on 12 December. Both were later visible on 15 December at the SPLA-N base at Daldoko.

T-55 tanks



Two of the four SAF T-55 tanks captured by the SPLA-N in the 10 December battle at Daldoko. SPLA-N commanders said that after a fifth tank was destroyed, SAF soldiers abandoned the other four and fled.



The interior of one of the T-55 tanks captured on 10 December. The components are inscribed with Cyrillic, suggesting Russian/Soviet manufacture.

BTR-80A APC



During the 12 December battle, SPLA-N said it destroyed this Russian-made BTR-80A APC and captured one other.

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NOTES

¹ Due to the restrictions of the Comprehensive Peace Agreement (CPA), Uganda could even have purchased the ammunition on behalf of South Sudan. Section 5.3.5. of the CPA explicitly forbade both the Sudanese government and the SPLA from the "replenishment of ammunition, weapons, and other lethal or military equipment" inside the ceasefire zone, which included all of present-day South Sudan and the Nuba Mountains (as well as other conflict areas in Sudan), during the interim peace period that ended in July 2011. In this scenario, Uganda would have merely the role of middleman as the technical consignee for the ammunition that was destined for South Sudan's arsenal all-along.

² A third but far more remote scenario, is that Uganda supplied the arms to South Sudan's SPLA and the Sudan Armed Forces captured the crates during border hostilities (such as the April 2012 battle over the oil town of Heglig). SPLA-N theoretically could have then captured those munitions from the Sudanese government. This is unlikely, not just because of the improbable sequence of events involved, but because the Sudanese government has no real need to keep anti-aircraft munitions on its front lines with the SPLA-North, which has no aircraft.