

# Soviet IS-3 ‘Stalin’ Heavy Tank: Importance of Getting Assessment Right

by retired MAJ James M. Warford

*In June 2014, anti-government separatists in Ukraine decided to include an IS-3 Stalin heavy tank built in 1946 that was anchoring a Ukrainian monument to the Great Patriotic War in their struggle against federal forces. After some coaxing from local mechanics and the belching of a lot of smoke from the engine, the pedestal-mounted tank started up. The IS-3 was driven off the monument platform and assumed new duties with the separatists for six months or so. According to separatist forces, the IS-3 was used in battle June 30, 2014. Eventually, Ukrainian federal forces regained control of the local area and recaptured the tank. This infamous IS-3 is now on display near Kiev at Ukraine’s National Military History Museum.*

While not very surprising to those familiar with the simplicity and robust nature of Soviet-era engineering, the story of that reborn IS-3 Stalin brings the tank’s performance and quality assessments to mind. Were American, British and ultimately North Atlantic Treaty Organization (NATO) intelligence assessments too critical of the IS-3? Was this impressive-looking heavy tank truly just intended for show and post-World War II propaganda purposes? More recent assessments of this popular tank confuse things even more by arguing that the IS-3 has historically been overrated.

Eliminating confusion like that surrounding the IS-3 must be a priority in today’s military environment. As the world situation changes and continues to remind us of the Cold War years, success on the battlefield may depend on getting it right.

The IS-3 heavy tank was first seen by the Western Powers during the Sept. 7, 1945, Allied victory parade when 52 of the new tanks rumbled through Berlin. The IS-3s belonged to 71<sup>st</sup> Guard Heavy Tank Regiment of 2<sup>nd</sup> Guards Tank Army. This new Soviet tank clearly came as a significant surprise to American and British leaders. A photograph taken during the parade highlighting a very concerned GEN Dwight D. Eisenhower may have been an indicator of things to come. The IS-3 was a game-changer. The Soviets had developed a tank that was far more advanced than anything in the American and British arsenals. The message was loud and clear: the new Soviet IS-3 represented the first volley in the “action-reaction” tank-development cycle that became a defining characteristic of the Cold War.



**Figure 1. An IS-3M “Joseph Stalin” tank in the “Arena” at TankFest 2018. (Photo by the author)**

## Impressive design

The design of the IS-3, even by today’s standards, was impressive. The tank was built from the ground up to provide the best possible ballistic protection from all directions of attack. The new hemispherical turret and “pike-nose” glacis were both heavily armored and so well-shaped from a ballistic-protection point of view that they basically eliminated any potential weak points to attack. The IS-3 was fitted with the very powerful D-25T 122mm main gun, well-known by the end of World War II, that was a proven killer of German heavy armor during the war.

The reaction caused by the appearance of the IS-3 was significant, pushing the Americans and British to develop their own heavy tanks as quickly as possible to counter this new threat. The resulting heavy tanks were the American M103 and the British Conqueror.

According to declassified intelligence reports from 1954 and 1958, key details regarding the IS-3 are included following. It’s important to note that some Russian open sources have reported even thicker frontal armor protection than what’s included here:

- Weight: 46 tons.
- Crew: four.
- Engine: 520 HP V-12 diesel.
- Speed: 25 mph.
- Armament: 122mm D-25T (12.7mm AA MG/7.62mm coax machinegun).
- Armor: Glacis: 4.7 inches (119mm) angled at 55 degrees = 8.2 inches (208mm); main gun mantlet: 7.9 inches (201mm) curved; turret sides: 7.9 inches (201mm) curved.
- Production: 1945-1946 (2,310 produced).

For the rest of the 1940s and 1950s, the IS-3 was photographed and paraded as often as possible by the Soviets, and reports were released to the public that highlighted the tank’s participation in various Soviet-army exercises. As time went by, however, all this attention led to more information being learned by American and NATO intelligence organizations. This information included reports that the cutting-edge Soviet tank was suffering from important mechanical and structural problems. These problems ranged from production hull welds being stressed to the point of failing and engine-reliability issues to a series of problems resulting from mounting such a large and heavy main gun in such a small turret. These problems may have been the deciding factor in the decision to end production in 1946.

## Soviets make upgrades

The Soviets were very aware of these problems and launched a series of upgrade efforts for the IS-3 between 1948 and 1952. Perhaps the most significant upgrade took place in 1957, resulting in the improved and iconic Cold War version of the tank designated as the IS-3M. The tank’s reputation, however, seemed damaged beyond repair. Prior to the fielding of the IS-3M, the IS-3’s reputation actually went from bad to worse in 1956 when its performance was assessed after its first confirmed use in combat during the Soviet invasion of Hungary.

On Nov. 4, 1956, the Soviet Army invaded Hungary with 17 divisions to “smash the counter revolution” going on in that country. Codenamed Operation Whirlwind, Soviet forces quickly encircled Budapest, split the city in half and began attacking Hungarian-army facilities. The Hungarian army put up mostly sporadic resistance. In fact, most Hungarian soldiers were loyal to the revolution and either deserted or fought with Hungarian resistance fighters. In some cases, whole Hungarian-army units refused to relinquish their weapons to the invading Soviets. Interestingly enough, participating in the fight against the defending Hungarians was not universally accepted by the Soviet forces in Hungary. According to a declassified Central Intelligence Agency (CIA) information report dated Oct. 30, 1956, “a sizeable defection to the rebel forces is taking place among Soviet troops in Hungary.”

The assessment of the IS-3’s performance during the fighting in Hungary is normally characterized as being very poor. For many observers, the dramatic photos of destroyed IS-3s, including a well-known photo published in *Life* magazine showing a number of coffins in the street alongside a destroyed IS-3 after a battle, provide all the

information needed. The damage to the reputation of the IS-3 was now set, and performance assessments of the tank incorrectly judged it as a failure.

The reality is that several factors that characterized the fighting in Hungary were not usually taken into account, ranging from poor leadership and communication to the minimized capabilities accredited to the resistance fighters. It's important to remember that these resistance fighters included Hungarian- and Soviet-army regulars. Finally, it's clear that the Soviet army failed to use the tactics for fighting in urban areas that it had mastered during World War II. However, the resistance fighters knew how to defend and were masters of the molotov cocktail.

A year before the invasion of Hungary, events were taking place in the Middle East that would set the stage for the second combat use of the IS-3 that would be fought 11 years later during the Six Day War in 1967. In 1955, open-source press reporting confirmed a significant arms deal was in the works between Czechoslovakia and Egypt that had the potential to increase tensions between Egypt and Israel to the breaking point. Although the weapons reportedly were coming from Czechoslovakia, the deal was part of a series of deals between Egypt and the Soviet Union. Worth about \$62 million, the deal included small arms, anti-aircraft guns, aircraft, artillery and tanks. According to a declassified report from September 1956, the deal included 170 T-34/85 medium tanks, 25 SU-100 assault guns and 60 IS-3M heavy tanks.

The declassified Oct. 4, 1955, edition of the CIA's *Central Intelligence Bulletin* confirmed the arrival of the first arms shipment and included the following: "Egypt's acquisition of heavy tanks, when made effective by training in their use, will introduce a new element into Middle Eastern military tactics, since neither the Arab states nor Israel has hitherto had equipment of this caliber." Interestingly enough, according to the declassified CIA *Central Intelligence Bulletin* dated May 26, 1956, a conversation took place between the Soviet military attaché and the American army attaché in Syria. The Soviet officer stated that "while the T-34 medium tank was suitable for use in Syria, he was opposed to Syria receiving IS-3M heavy tanks and had so recommended. He added that the Syrians would be better off fighting on camels than in tanks." However, the Egyptians, like the Soviets at the end of World War II, were happy to show off their new IS-3Ms, and *Life* magazine provided extensive coverage of the IS-3Ms as they were first paraded through Cairo July 23, 1956.



Figure 2. An IS-3M tank on static display at TankFest 2018. (Photo by the author)

## Breaking point

The breaking point in the Middle East was finally achieved June 5, 1967, when the Israeli air force launched a series of very successful air strikes against Arab airfields, giving the Israelis almost complete air superiority from the beginning of the Six Day War. Israeli tanks from MG Israel Tal's division attacked quickly into the Sinai Desert, into the heart of Egyptian-army defensive positions. In the key battle fought at Rafah Junction, the Egyptian 7<sup>th</sup> Infantry Division was supported by IS-3M heavy tanks. The Israelis were very aware of the Egyptian IS-3Ms and considered them very dangerous opponents. Authoritative Israeli references on the Six Day War include several instances where IS-3Ms were described using verbiage like "the most heavily armored tanks ever built," "World War II monsters" and simply as being "terrifying." Some translations of these battlefield accounts from Hebrew to English also identify the Egyptian IS-3Ms as "Stalinists."

The fighting in the critical Rafah Junction area can be characterized as tank vs. tank with Egyptian "Stalinists" facing off against Israeli U.S.-made M48 Patton tanks. The Israeli plan of attack was designed specifically to avoid a "toe-to-toe" frontal fight with these IS-3Ms and their 122mm main guns and thick frontal armor. When the battle was finally over, most of the battalion of IS-3Ms in the Rafah Junction area was destroyed by the more modern and more maneuverable Israeli tanks. The Israelis suffered significant losses, too, including several of their M48s destroyed by IS-3M main-gun fire (using Soviet armor-piercing ammunition dating back to 1945-47) and the loss of the most decorated soldier in the Israeli army, CPT Nechemiah Cohen.

The assessment of the IS-3M's performance during the fighting in the Sinai is normally characterized as very poor. Like the assessments following the fighting in Hungary in 1956, the IS-3M's performance assessment from the

fighting in 1967 was heavily and incorrectly influenced by a few key photographs taken during that conflict. Many observers cite well-known photographs that showed a destroyed IS-3M with its turret blown off, and another of a rusty and mostly sand-covered IS-3M in the desert, as confirmation of the tank's poor performance.

## Poor training's impact

Assessing the tank's performance during the Six Day War had the additional challenge of analyzing the events that led to a large number of IS-3Ms being captured intact after being abandoned by their Egyptian crews. The Egyptian Army's 125<sup>th</sup> Tank Brigade was equipped with 60 IS-3Ms deployed in defensive positions in the El-Kuntilla area. After fighting against the advancing Israelis, many Egyptian tank crews abandoned their fully operational IS-3Ms and scattered in the desert. This desperate action had nothing to do with the capabilities of their tanks. It was in fact all about poor training, low skill level and lack of motivation in those Egyptian tank units.

At war's end, the Israelis had destroyed some 16 IS-3Ms and captured about 30. Some sources put the combined total of IS-3M losses as high as 73. Finally, as previously mentioned, the Israelis were very aware of the IS-3M's capabilities, and they understood that their 90mm tank guns probably wouldn't be able to penetrate the armor of the Egyptian heavy tanks. Prior to the war, the Israelis launched an upgrade program that added the powerful 105mm main gun to many of their Centurion and M48 tanks. The fighting in the Rafah Junction area included the one company of M48s in the entire Israeli army that had their 90mm main guns replaced by the new 105mm main guns.

While this tank company was very successful during the Six Day War and was decorated by Tal, declassified photographs showing the results from live-fire testing done in Israel after the war tell an interesting story. During this testing, captured Egyptian IS-3Ms were repeatedly fired on and hit by 105mm Armor-Piercing Discarding Sabot ammunition without the tank's frontal armor being penetrated.

In many ways, the IS-3 heavy tank represents one of the very first "shots" of the Cold War. It certainly came as a big surprise to all those who saw it, and the countries it was intended to impress or intimidate were compelled into action. Increasingly negative reviews as more was learned about the IS-3 only put the tank's potential adversaries into the dangerous position of underestimating this important Soviet tank. U.S. and NATO focus on learning as much about Soviet weapons systems as possible was constantly challenged by persistent naysayers who continued to report that Soviet tanks and the technology they represented were not truly a threat.

The Cold War years can be characterized by the massive efforts expended (in some cases not so successfully) to get these assessments right. Historic examples include the struggle to correctly identify the T-64 and T-72 main battle tanks, trying to confirm Soviet intent around which weapon systems participated in Red Square parades. NATO and U.S. analysts also tried very hard to determine the relationship between Soviet export weapons and those not intended for export.

In today's world, increasingly dangerous battlefields make truly knowing our enemies and accurately assessing their capabilities more important than ever.

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### **Acronym Quick-Scan**

**CGSC** – Command and General Staff College

**CIA** – Central Intelligence Agency

**NATO** – North Atlantic Treaty Organization