

The lessons learned from fighting early in World War Two proved the combat value of self-propelled/assault artillery, writes **Péter Mujzer**

**A**fter failing to purchase German assault guns a few years into World War Two, Hungary's military leadership commissioned the Weiss Manfred factory to design and manufacture a new self-propelled artillery vehicle. It was built using available parts from the Turán tank, 40M 105mm howitzer and the 43M 75mm long-barrelled gun and became known as the Zrínyi assault gun.

According to unconfirmed sources, Hungarian experts had first visited Italy sometime in 1941-42 and were shown around a factory where Semovente assault guns were produced for the Italian Army. The Italian Semovente self-propelled gun was designed on the Italian M13/40 medium tank in 1941. Although there is no hard evidence on whether the Hungarians were influenced by their Italian colleagues, the concept of the Italian and Hungarian designs was very similar.

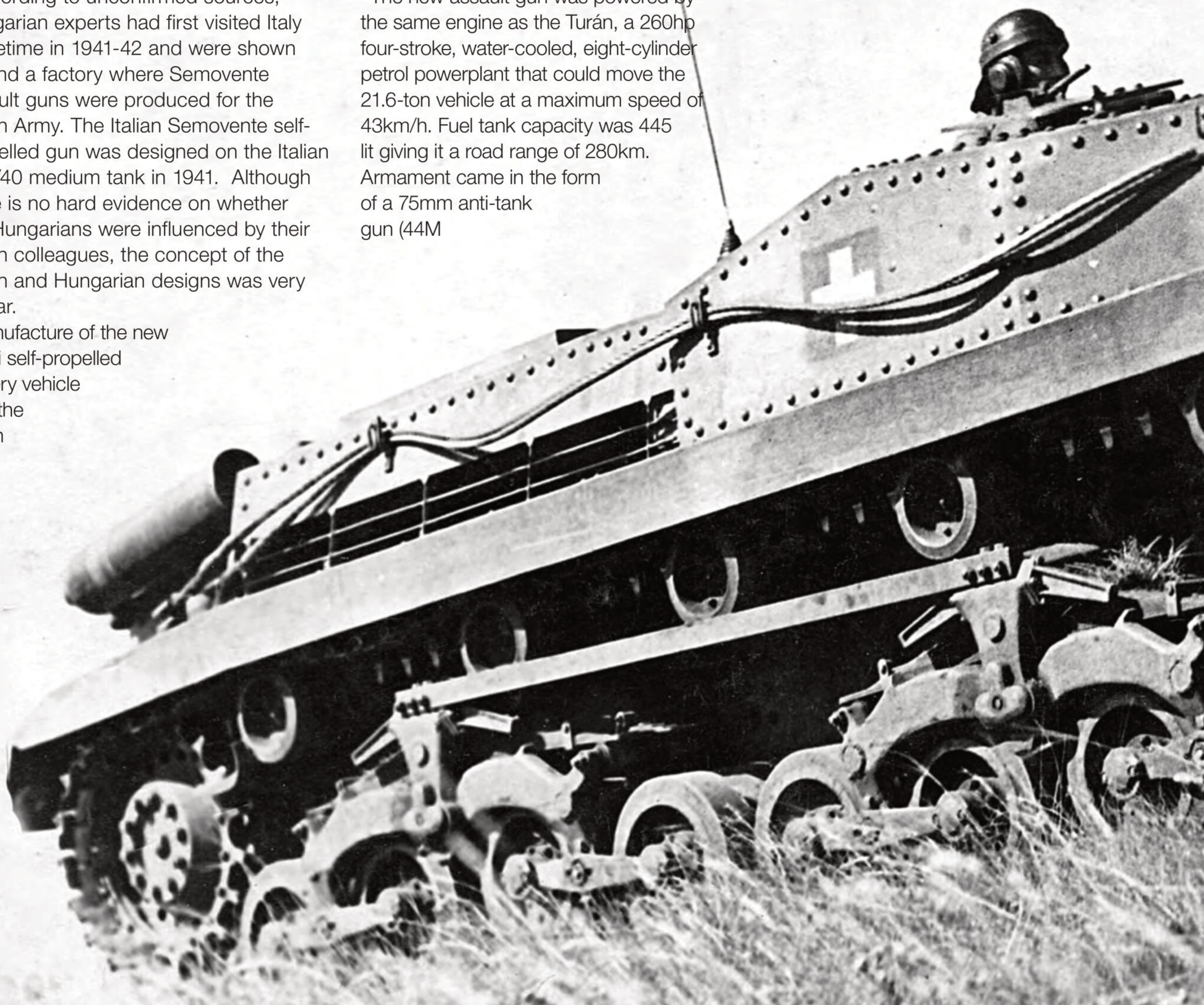
Manufacture of the new Zrínyi self-propelled artillery vehicle saw the Turán

tank turret being removed with the chassis being widened to allow for the installation of the gun. The frontal armour was 75mm thick while the fighting compartment, a wide spacious 'box' shape, was protected by armour plates varying between 13mm and 25mm. The length of the Zrínyi, chain-driven elements, power transmission systems, controls, suspension and production technology remained the same as the Turán tank.

The new assault gun was powered by the same engine as the Turán, a 260hp four-stroke, water-cooled, eight-cylinder petrol powerplant that could move the 21.6-ton vehicle at a maximum speed of 43km/h. Fuel tank capacity was 445 lit giving it a road range of 280km. Armament came in the form of a 75mm anti-tank gun (44M

Zrínyi I) and a 105mm howitzer (the 40/43M Zrínyi II). The ammunition allowance given to the assault howitzer was 52 rounds per vehicle. However, lived battlefield experiences show the crew could only pack more than 30 rounds at the expense of individual equipment.

Ammunition consisted of 38/33M

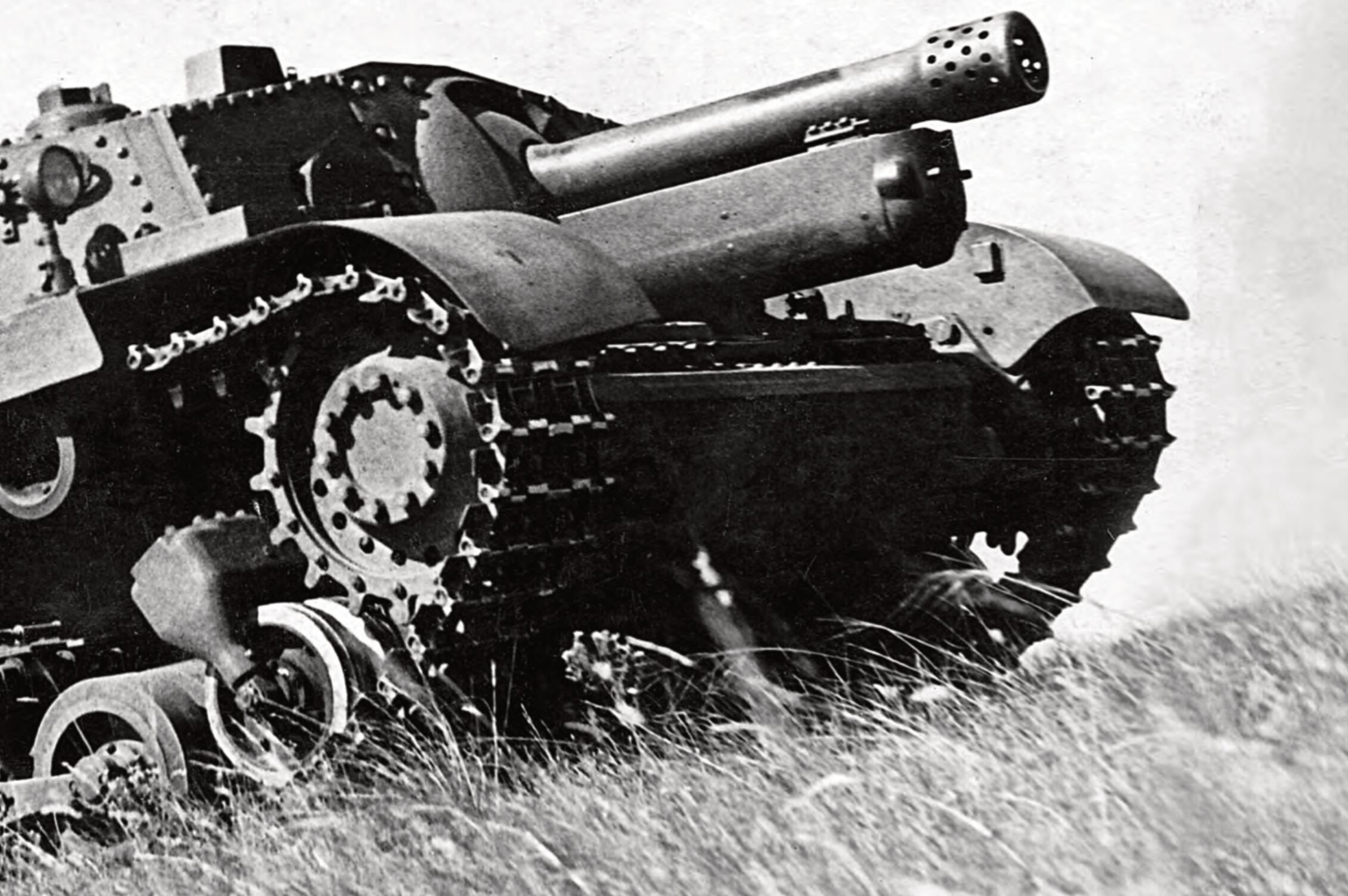


# All-out

HE-fragmentation, 42M HEAT, and 38/33M smoke shells. The assault howitzer fired cased separate loading ammunition, which made the rate of fire slower at only five to six shots per minute. The crew (commander, gun layer, loader-radio operator, and driver) were armed for close protection with four service pistols, three sub-machine guns, eight hand grenades, and one flare pistol.

The Hungarian Ministry of Defence placed an order for 40 assault howitzers in January 1943 followed by a further 50. As the fighting ability of the Turán could not be improved, the plan was to mass-produce the assault howitzers to combat the Soviet T-34 tank. The first assault gun battalion was set up and equipped with 34 Zrínyi IIs in March 1944. The Zrínyi I prototype was finished in February 1944 but had problems that could not be solved and only the ►

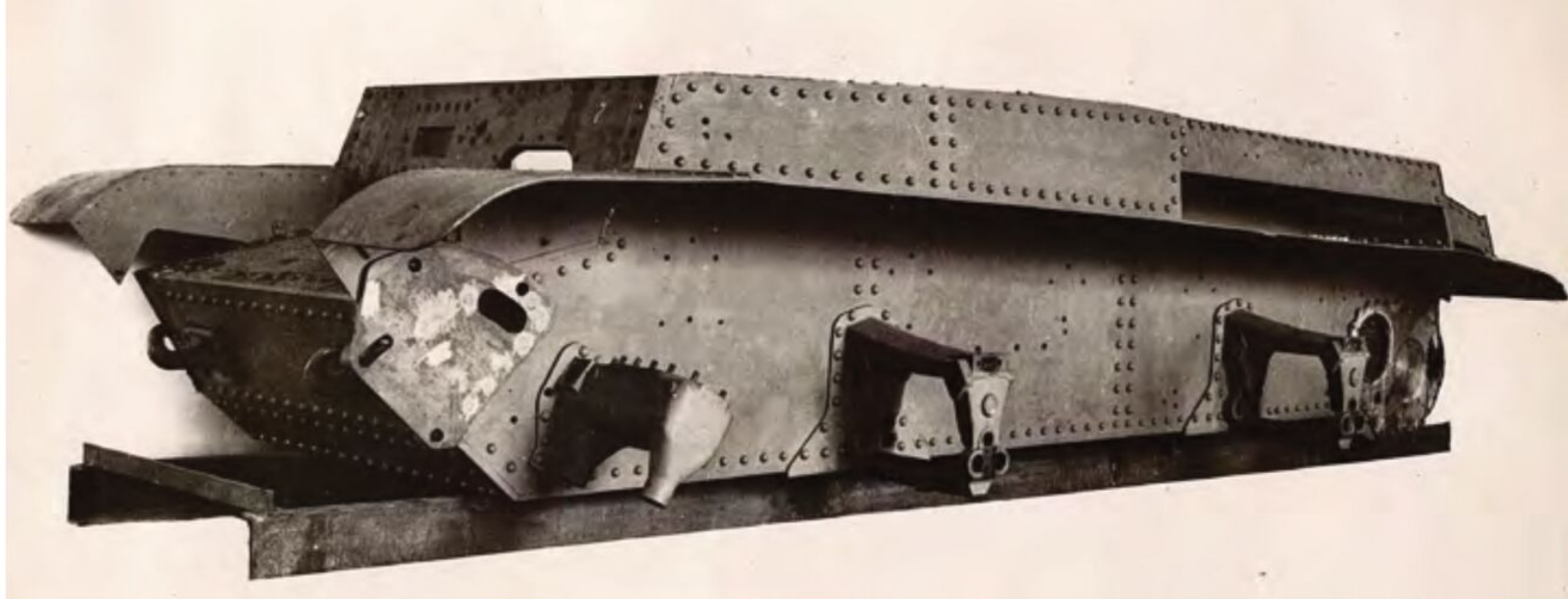
*A gun commander leading his vehicles in open hatch position, wearing the 39M crash helmets with intercom. This 40/43M Zrínyi assault howitzer was the prototype H-801, had stick antenna for the radio BONHARDT*



*'After about three to four minutes of continuous fire, the assault howitzers had knocked out 18 T-34s'*

# Assault

**OPPOSITE MIDDLE: A heavily camouflaged 40/43M Zrínyi assault howitzer with its distinctive perforated muzzle brake of the 105mm howitzer**  
DEÁK



**RIGHT: The armoured hull of the Zrínyi assault vehicles based on the chassis of the Turán tanks**  
PICTURE FROM SERVICE MANUAL



**BELOW RIGHT: Assault artillerymen with their early production 40/43M Zrínyi assault howitzer with the Turán-style driver slot, at the yard of the Assault Artillery Training Cadre at Hajmáskér in summer of 1944** DEÁK

**BELOW: The 40/43M Zrínyi II assault howitzer was armed with the 40M 105mm field howitzer, produced by the MÁVAG Ordnance Factory at Diósgyőr. It was a stopgap solution but worked well** SÁRHIDAI



prototype was ever produced.

As the tide began to turn in the war, Allied air raids struck the Weiss Manfred factory on July 27, 1944, ending mass production of the assault howitzers. Although about 15 to 20 half-finished vehicles and spares were salvaged, the last Zrínyi assault howitzers were completed at the Ganz factory in September-October 1944. The last known number plate was 3H-066. The Weiss Manfred factory had produced 66 Zrínyi assault howitzers and the Ganz Factory 10

by the end of 1944. In all, about 76 Zrínyi assault howitzers were produced.

Efforts to improve the firepower of the Zrínyi assault howitzers using German Nebelwerfer rocket launchers were made in late 1943 and early 1944. The original Nebelwerfer rocket launcher had six 15cm rocket tubes that were already in use with the Hungarian Army. The concept was to use rocket fire to destroy the enemy's anti-tank position before the Zrínyis entered the fray in the role of an

anti-tank gun.

The effectiveness of the Zrínyi was on display on April 21, 1944. Hungary's 1/2nd Assault Artillery Battery using Zrínyi assault howitzers attacked a Soviet anti-tank battery and an assembling infantry regiment on the edge of a forest. The anti-tank battery was destroyed by two minutes of quick-burst fire by an assault howitzer platoon. A second Zrínyi platoon fired a five-minute volley of fragmentation rounds against the infantry regiment, with the destruction caused leading to Hungarian infantry naming the forest 'Deadwood' because they had never seen so many dead enemies before.

The assault howitzers were also deployed in platoon size or sometimes individually to cover withdrawing troops of the 1st Hungarian Army. Losses were continuous due to enemy action, mechanical breakdown, lack of fuel, or simply getting lost in the dark.

On April 25, 1944, the Hungarian Army's 1/3rd Assault Artillery Battery received orders to support an infantry battalion, 20km southeast of Stanislaw. Zrínyi assault howitzers knocked out two of eight attacking Soviet T-34s, forcing a withdrawal. However, by the end of July, the Soviet attack had pushed Hungarian troops back from Galicia to the Carpathians and during the retreat, two-thirds of the assault howitzers of the 1st Assault Artillery Battalion were lost.

On the afternoon of September 22, 1944, a Hungarian infantry battalion, reinforced by the 2nd Battery of the 10th



**Camouflaged 40/43M Zrínyi assault howitzers and infantry armed with 07/31M Schwarzlose machine gun fighting at South-Transylvania in September 1944** KOVÁCSHÁZY

*The prototype, iron vehicle of the 40/43M Zrínyi assault howitzer H-801 with the identical oval shape visor slots for the driver and the gunner on the frontal armoured plate BONHARDT*



***Today, the only surviving 40/43M Zrínyi assault howitzer... is housed at the Kubinka Tank Museum in Russia'***



size and armament of the Zrínyi made it ideal for street fighting, the low silhouette helping conceal them in the rubble while the 105mm howitzer could penetrate Russian armour at close range. However, as the Soviet Army pressed and Hungarian losses mounted, the remaining four serviceable assault howitzers of 1/3rd Battery (also the last serviceable assault howitzers of the 1st Assault Artillery Battalion), had fired

their last HE shots at the enemy by February 9, 1945. Today, the only surviving 40/43M Zrínyi assault howitzer, which once belonged to the 1st Assault Artillery Battalion, is housed at the Kubinka Tank Museum in Russia. It was captured by the Red Army in the summer of 1944 in Galicia. The skirt plated Zrínyi wore the individual marking: 'IRÉNKE' (Lizy) painted on the driver's visor apparatus. ◀

Assault Gun Battalion ambushed Red Army troops. Six Zrínyi assault howitzers led by Ensign János Bozsoki set up firing position in bushy terrain which helped camouflage them. Advancing T-34 tanks were allowed to close, some just 50m away, when the Hungarian crews opened fire. After about three to four minutes of fire, the assault howitzers had knocked out 18 T-34s. Ensign János Bozsoki received the highest Hungarian military decoration, the Officers' Gold Bravery Medal, becoming only the seventh Hungarian officer to earn this medal during the war.

During the siege of Budapest, six assault gun battalions, led by Lt Gen Ernő Billnitzer, commander of assault artillery troops, had 2,000 men with 30 assault guns and eight anti-tank guns in the city. The battalions were equipped with Zrínyis and StuGs, however, the majority of trained crews were deployed as infantry. The assault guns provided a formidable threat to advancing Russian troops. The

***A wooden bridge collapsed under the weight of the 40/43M Zrínyi assault howitzer during the retreat in the Carpathian Mountain ARCHIVE***

