

= LT vz . 34 =

The LT vz . 34 , formally designated as Lehký Tank vzor 34 (" Light Tank Model 34 ") was a Czechoslovak @-@ designed light tank used mainly by Slovakia during World War II . Its suspension was based on that of the Carden @-@ Loyd tankette , of which the Czechs had purchased three , plus a manufacturing license , in 1930 . Dissatisfied with the prototypes of the Tan?ík vz . 33 tankette , the Czech Army decided that it would be easier to design a light tank from scratch rather than modify a tankette 's chassis to carry a fully rotating armored turret . 50 were built , the last of which was delivered during 1936 , of which the Germans captured 23 when they occupied Bohemia @-@ Moravia in March 1939 , but they promptly scrapped them . The Slovaks seized the remaining 27 when they declared independence from Czechoslovakia at the same time . In Slovak service it only saw combat during the Slovak National Uprising .

= = Description = =

The LT vz . 34 was assembled from a framework of steel " angle iron " beams , to which armor plates were riveted . A 3 mm (0 @. @ 12 in) firewall separated the engine compartment from the crew . A door allowed access to the engine from the crew compartment . It also had ventilation openings that could be closed . The driver sat on the right side using a 300 by 75 millimetres (11 @. @ 8 in x 3 @. @ 0 in) observation port protected by two flaps . The inner flap had an episcopes with a 25 ° field of view . It was connected to the armored outer flap so that opening one closed the other . The outer flap had a 3 mm (0 @. @ 12 in) slit . To his right was a vision slit 120 by 3 millimetres (4 @. @ 72 in x 0 @. @ 12 in) protected by 50 millimetres (2 @. @ 0 in) of bulletproof glass . The inner flap was padded so that the driver could rest his head on it when driving . The radio operator sat on the left and had his own 120 by 50 millimetres (4 @. @ 7 in x 2 @. @ 0 in) vision port with 50 millimetres (2 @. @ 0 in) of bulletproof glass and an armored shutter . His radios were mounted on the left wall of the hull . The hull machine gun was between the driver and radio operator in a ball mount with 30 ° of traverse . It could elevate 25 ° and depress 10 ° . Most of the machine gun 's barrel protruded from the mount and was protected by an armored trough . The mount had a spotting telescope or open sights could be used if the plug at the top of the ball mount was removed . If necessary the driver could lock the mount into position and fire it himself using a Bowden cable .

The turret ring had a diameter of 1 @. @ 265 metres (49 @. @ 8 in) . The turret sides were 15 mm (0 @. @ 59 in) thick and its roof had a thickness of 8 mm (0 @. @ 31 in) . The turret was manually traversed (3 ° per rotation of the handle) , but the gearing could be disengaged to allow the commander to shoulder the turret around as desired . The turret had a flat face in the center of which was mounted the 3 @. @ 72 cm (1 @. @ 46 in) main armament . On the right side was another 7 @. @ 92 mm (0 @. @ 312 in) machine gun in a ball mount . The commander had four episcopes in his cupola and a monocular mirror , 1 @. @ 3 x 35 ° periscope which he could extend once he removed its armored cover in his hatch for vision while " buttoned @-@ up " . This meant that the commander was responsible for loading , aiming and firing the main gun and the turret machine gun while simultaneously commanding the tank .

The vertical front and side armor was 15 mm (0 @. @ 59 in) thick , the slanted plates had a thickness of 12 mm (0 @. @ 47 in) , the engine hatch was 10 mm (0 @. @ 39 in) thick and the top and bottom plates were 8 mm (0 @. @ 31 in) in thickness . This was deemed enough to deflect armor @-@ piercing 7 @. @ 92 mm (0 @. @ 312 in) bullets fired from distances greater than 75 metres (82 yd) .

The 6 @. @ 08 litres (371 cu in) , water @-@ cooled , 62 @. @ 5 horsepower (46 @. @ 6 kW) , inline 4 @-@ cylinder Praga engine used a gasoline @-@ alcohol mix . It had a top speed on the road of 30 kilometres per hour (19 mph) and about 15 kilometres per hour (9 @. @ 3 mph) cross @-@ country . One 64 @. @ 5 litres (17 @. @ 0 US gal) fuel tank was located on each side of the engine . The transmission had four forward gears and one reverse gear to drive the front @-@ mounted drive sprockets .

The suspension was an enlarged and modified version of that used in the Carden @-@ Loyd tankettes . It consisted of two small road wheels fastened together on a frame , two frames paired and sprung by leaf springs that made a wheel carrier , two wheel carriers per side . The track was guided by two return rollers and wooden , metal @-@ lined frames . The rear @-@ mounted idler wheel was used to adjust track tension . It had a ground pressure of only 0 @. @ 5 kg / cm² . It could cross a ditch 2 metres (6 @. @ 6 ft) wide , climb an obstacle .8 metres (2 @. @ 6 ft) high and ford a stream .8 metres (2 @. @ 6 ft) deep . It could uproot trees .18 metres (7 @. @ 1 in) thick and breach a wall .5 metres (20 in) thick .

The main armament was a ?koda ÚV vz . 34 (A3) gun with a pepperpot muzzle brake and a prominent armored recoil cylinder above the barrel . It fired a .815 kilograms (1 @. @ 80 lb) armor @-@ piercing shell at 690 metres per second (2 @, @ 300 ft / s) . It was credited with penetrating a plate inclined at 30 ° from the vertical 37 millimetres (1 @. @ 5 in) thick at 100 metres (110 yd) , 31 millimetres (1 @. @ 2 in) thick at 500 metres (550 yd) , 26 millimetres (1 @. @ 0 in) thick at 1 @, @ 000 metres (1 @, @ 100 yd) , and 22 millimetres (0 @. @ 87 in) thick at 1 @, @ 500 metres (1 @, @ 600 yd) . Another source quotes penetration of a vertical plate 45 millimetres (1 @. @ 8 in) thick at 500 metres (550 yd) . The machine gun 's ball mount could be coupled to the main gun or used independently . Both weapons could elevate 25 ° and depress 10 ° . They both used 1.25x power sights with a 25 ° field of view . The tank used Zbrojovka Brno ZB vz . 35 heavy machine guns in both ball mounts .

= = Development = =

One prototype was ordered from ?eskomoravská Kolben @-@ Dan?k in 1931 , but development was slow and it was accepted only in November 1932 . Its evaluations were very positive and an order for fifty was placed on 19 April 1933 . The first six of these were to serve as pre @-@ production models and were to be delivered by 30 September 1933 . The delivery date for the next batch of twenty @-@ four was a year after that and the final batch of twenty was due by 30 July 1935 . Production was delayed by quality problems with the initial batch of armor plates from Poldi and delivery of the pre @-@ production series did not occur until 23 April 1934 . A bigger problem was that the Army had rejected ?KD 's proposed armament of a 4 @. @ 7 centimetres (1 @. @ 9 in) Vickers 44 / 60 gun and two ZB vz . 26 machine guns so the contract was signed with no design work on the desired armament configuration . ?KD did not finalize its design until December 1933 and the first six tanks were delivered with only a pair of ZB vz . 26 machine guns . The last tanks were delivered on 14 January 1936 , but the six pre @-@ production models had to be returned to the factory to be upgraded with the proper armament and otherwise modified up to the latest standards . The last one was delivered on 17 August 1936 .

= = Operational history = =

= = = Czechoslovakia = = =

The Czech Army realized that the 15 mm (0 @. @ 59 in) armor on its LT vz . 34 tanks was too thin and a program to replace it was quickly mounted which resulted in the LT vz . 35 . In the meantime they offered the Army an opportunity to train with more modern tanks than its few surviving World War I @-@ era Renault FTs . Each of the three armored regiments received between nine and twenty @-@ four until replaced by the LT vz . 35 from 1937 . After the Munich Agreement in October 1938 the army tried to sell them , but could find no takers . In November 1938 it decided to concentrate all of them in the Third Armored Regiment in Slovakia , but only eighteen had been transferred before the German occupation of Czechoslovakia and the Slovak declaration of independence in March 1939 .

= = = Germany = = =

The Germans captured twenty @-@ three LT vz . 34s and the prototype when they occupied Czechoslovakia , but there is no record of their use so they were presumably quickly scrapped . Ten LT vz . 34s were captured after they were abandoned by the insurgents during the Slovak National Uprising in 1944 . They were shipped to Skoda for repairs , but the local military representative ordered them scrapped because of their poor condition and obsolescence . The Waffen @-@ SS tried to overturn this order as it planned to transfer them to Nazi puppet state of Croatia . Two were saved from the scrapyard , but by March 1945 the others had their turrets salvaged to be rearmed with two machine guns and mounted in fixed fortifications .

= = = Slovakia = = =

The twenty @-@ seven LT vz . 34s formed one company in the Armored Battalion " Martin " formed by the Slovak Army in mid @-@ 1939 , which was later expanded into the Armored Regiment , but they were relegated to training duties once the Slovaks began to receive more modern tanks from Germany in 1941 . Ten were abandoned by the insurgents when the Slovak National Uprising began in September 1944 and were quickly captured by the Germans . The others were dug in on the approaches to Zvolen .