

= ASM @-@ A @-@ 1 Tarzon =

The ASM @-@ A @-@ 1 Tarzon , also known as VB @-@ 13 , was a guided bomb developed by the United States Army Air Forces during the late 1940s . Mating the guidance system of the earlier Razon radio @-@ controlled weapon with a British Tallboy 12 @,@ 000 @-@ pound ( 5 @,@ 400 kg ) bomb , the ASM @-@ A @-@ 1 saw brief operational service in the Korean War before being withdrawn from service in 1951 .

= = Design and development = =

Development of the VB @-@ 13 Tarzon began in February 1945 , with Bell Aircraft being awarded a contract by the United States Army Air Forces for the development of a very large guided bomb . The VB @-@ 13 was a combination of a radio @-@ command guidance system as used on the smaller VB @-@ 3 Razon ( ' Range And azimuth only ' ) guided bomb with the British @-@ developed Tallboy 12 @,@ 000 @-@ pound ( 5 @,@ 400 kg ) " earthquake " bomb , known to the USAAF as M112 . The ' Tarzon ' name was a portmanteau , combining Tallboy , range and azimuth only , describing the weapon and guidance system ; and was pronounced similarly to that of " Tarzan " , the popular " ape @-@ man " fictional character .

The VB @-@ 13 , redesignated ASM @-@ A @-@ 1 in 1948 , was developed under the project code MX @-@ 674 . It had an annular wing around the midsection of its body , mounted near the weapon 's center of gravity . At the rear of the bomb was an octagonal tail surface containing the Razon control surfaces . Intended to be carried by the Boeing B @-@ 29 Superfortress bomber , the Tarzon bomb used the combination of AN / ARW @-@ 38 [ Joint Army Navy , Piloted Aircraft , Radio , Automatic Flight or Remote Control ] command link transmitter on the B @-@ 29 and an AN / URW @-@ 2 [ Joint Army Navy , Utility , Radio , Automatic Flight or Remote Control ] receiver on the Tarzon to provide manual command guidance of range and azimuth . This was done with visual tracking of the bomb 's course , aided by a flare mounted in the tail of the weapon . Gyroscopes on board the ASM @-@ A @-@ 1 aided in stabilisation , while a pneumatic system drove the bomb 's control surfaces . The guidance system was considered effective ; Tarzon proved in testing to have an accuracy of 280 feet ( 85 m ) .

In addition to the 12 @,@ 000 pounds ( 5 @,@ 400 kg ) nominal weight of the Tallboy it was based on , the annular wing and control surfaces boosted the weight of Tarzon by an additional 1 @,@ 100 pounds ( 500 kg ) . As a result , the size and weight of the ASM @-@ A @-@ 1 were such that the weapon would not fit inside the bomb bay of a Superfortress ; instead , the weapon was carried in a semi @-@ recessed mounting , half the weapon being exposed to the airstream . This increased drag on the carrying aircraft , in addition to causing turbulent airflow that could affect the handling of the B @-@ 29 .

= = Operational history = =

Although the VB @-@ 13 project had not reached the testing stage by the end of World War II , it avoided being cancelled , proceeding as a low @-@ priority project . Limited testing was conducted during 1948 and 1949 ; additional testing at Alamogordo , New Mexico in 1950 led to the Tarzon being approved for operational service in the Korean War .

Tarzon saw its first combat use in December 1950 , the ASM @-@ A @-@ 1 replacing the Razon in operational service ; the smaller weapon had been determined to be too small for effective use against bridges and other hardened targets . Used solely by the 19th Bomb Group , which had previously conducted the Razon 's combat missions , the first Tarzon drop in combat took place on December 14 , 1950 .

The largest bomb used in combat during the war , Tarzon was used in strikes against North Korean bridges and other hardened targets , the Tarzon 's improved accuracy over conventional ' dumb bombs ' led to the confirmed destruction of at least six high @-@ priority targets during approximately six months of combat use ; these included a hydroelectric plant , proving the

effectiveness of guided weapons against conventional targets as well as bridges .

Thirty Tarzon missions were flown between December 1950 and March 1951 ; the weapon 's success led to a contract for the production of 1 @, @ 000 additional ASM @-@ A @-@ 1 missiles . On March 29 , 1951 , however , a Tarzon strike against Sinuiju went awry ; the group commander 's aircraft was destroyed as a result of the premature detonation of the bomb when , the aircraft suffering mechanical difficulties , the weapon was jettisoned in preparation for ditching . The thirtieth , and as it proved final , mission , three weeks following the Sinuiju mission , also suffered an unintentional detonation of a jettisoned , " safed " bomb , although this time without the loss of the aircraft .

An investigation proved that the fault lay in the construction of the bomb 's tail ; breaking up on impact , a ' safed ' bomb would have its arming wire removed , rendering it ' unsafe ' and detonating the weapon . Modifications were made to solve the problem , but the damage had been done ; the safety issues , increased maintenance costs compared to conventional bombs , the fact that the bomb 's guidance system required clear @-@ day use only , rendering the bombers vulnerable to enemy fighters , and required that the weapon be released at a prime altitude for the aircraft to be in danger from enemy flak . These combined with the weapon 's poor reliability ? only six of twenty @-@ eight bombs dropped successfully destroyed their targets ? to result in the production order being canceled by the USAF ; following this , the Tarzon program as a whole was terminated in August 1951 .