

12000lb Tallboy Bomb



Development of the TallBoy bomb was completed by March 1944, these bombs were designed for the attack of targets such as Uboat pens, tunnels, bridges and viaducts as normal bombs were ineffective against such targets. It had also been considered to use the bombs in area attacks but it was felt that they would be less effective than the current 8,000 and 12,000lb High Capacity bombs. The bomb was designed by Barnes Wallis, designer of the Wellington bomb and the 'bouncing bomb', Mr Wallis had been pushing for very large bombs for years and he felt that a large bomb which could penetrate deep into the ground could damage or destroy large structures.

The Tallboy bomb was expected to penetrate up to around 60 feet deep in soil and 65 feet in clay and create a crater up to 110 feet wide and 45 feet deep. Against a 13 foot thick un-reinforced concrete roof the Tallboy was expected to go right though, it was known that reinforcement was the most important factor how much reinforced concrete the bomb could penetrate. Penetration of around 8 feet was estimated but against a 13 foot thick reinforced roof, although complete penetration was not expected the explosion would most likely destroy a large part of the roof. Against a soft target such as a railway line it was expected that it would take at least 5 days for the resulting crater to be filled in, and if the bomb was dropped near a bridge or a tunnel the repair time could be weeks or even months.

Filling for the bomb was Torpex.

First use

The first target attacked with Tallboy bombs was the Saumur railway tunnel on the night of the 8/9th of June. The raid was carried out by 19 Lancasters of

617 Squadron and their bombs were fused for 0.025 seconds. They were assisted by a flare force of 10 other Lancasters and 3 Mosquitoes. The two aiming points were the entrances to the tunnel, these were marked by red spot flares from low level by Mosquitos, the flare carrying aircraft also carried 5-8 1,000lb General Purpose bombs which were dropped on the bridge over the river.

At the Southern end of the tunnel 18 Tallboys were dropped, due to the presence of cloud the aircraft were forced to drop from 8,400 and 10,500 feet another Tallboy was dropped on the Northern end of the tunnel. 13 of the bombs fail in close proximity to the markets, 4 has significantly greater error and another missed by 680 yards. The single bomb aimed at the Northern end fell 170 yards from the aiming point.

The average crater size was 80 feet by 25 feet, the largest had a diameter of 120 feet and a depth of

30 feet. Damage the tunnel and surrounding tracks was extensive with one bomb causing the tunnel to collapse, all bombs functioned correctly.

Tallboy bomb specifications

Bomb	12000-lb DP Mk I
Construction	Cast Steel
Usual weight	18500 lb (5402.27kg)
Charge	60% weight ratio
Total length	152 in (340.08cm)
Body length	96 in (243.52cm)
Body diameter	24 in (61.96cm)
Wall thickness	1.25-4 in (3.175-10.414cm)
Tail length	128 in (325.12cm)
Tail width	42 in (106.68cm)
Filling	orpex

Summery of Tallboy raids

Over 700 of the bombs were dropped on enemy territory during the war.

By Night

TNT Results (Feet)

351070000 (m) 0000 Fjord
 683490000 (m) 0000 Installations
 883490000 (m) 0000 Pens 84/25ft, One feel of
 481115000 (m) 0000 Essential storage
 140610000 (m) 0000 Used penetration and
 236010000 (m) 0000 (General) (General)
 373490000 (m) 0000 aqueduct)
 By 151070000 (m) 0000
 290020000 (m) 0000 Screen, No serious damage
 120010000 (m) 0000 Screen, No serious damage
 120010000 (m) 0000 and sunk by 3 direct
 120010000 (m) 0000
 240010000 (m) 0000 quarry face, railway track
 250010000 (m) 0000 overhanging roof 100'x1
 671110000 (m) 0000 concrete construction de
 120010000 (m) 0000 cliff collapsed, the four
 240010000 (m) 0000 caused severe damage to
 371110000 (m) 0000
 151070000 (m) 0000
 520010000 (m) 0000 roof of pens, one pen
 670010000 (m) 0000 roof, no penetrations
 970010000 (m) 0000 large parts of concrete
 120010000 (m) 0000 roof, one probable p
 130010000 (m) 0000 roof, no penetration
 180010000 (m) 0000 damage
 240010000 (m) 0000, one penetration, ot
 151070000 (m) 0000 section of roof collapsed
 290010000 (m) 0000 f over entrance 158'x
 120010000 (m) 0000 direct hits

6 / 6