

# The 17 Pounder Anti-Tank Gun



Like the 2 Pounder the 17 Pounder was originally planned to be a tank gun, in April 1941 the question of a weapon to replace the 6 Pounder was debated at a meeting by the Design Department and the artillery and tank branches of both the War Office and the Ministry of Supply. At this meeting it was decided that the new gun design must aim to be one piece common to both tank and anti-tank mountings and penetration of between

120-150mm - this would require a 3" gun firing a 17lb shell at around 2700fps. It was agreed that the carriage to mount the gun was to be of split-trial type and have a transverse of 60 degrees.

The prototypes were created and trials were completed at the beginning of 1942 and orders were placed. The first production guns were completed in April 1942 and by the end of the year 670 of the guns had been completed. There seems to be a lot of confusion as to the 17 Pounder carriage, the first production 17pdr carriages were completed in May 1942 but production was extremely slow, when the War Office issued urgent demands for 17 Pounder guns to be sent to North Africa there was not enough carriages available to mount the guns required so guns were mounted on 25 Pounder carriages instead, these were known as 25/17pdr carriages, codename Pheasant. 150 of these carriages were ordered and this order was completed by December 1942. In October 1942, 59 17 Pounder and 27,000 rounds of ammunition were shipped to the Middle East, I have not yet found the exact date of the guns arrival but they were definitely present by the end of December. In November/December a further 40 guns were sent.

Concerns were raised at the weight of the equipment which would be around 3 tons, it was realised that this would clearly limit the mobility of the weapon and create delays when getting

the weapon into and out of action and make concealment difficult. Due to these issues it was decided to mount the guns in a self propelled chassis, it was clear that no existing tank could accommodate the gun, the new cruiser tanks (Cavalier and Cromwell) had turrets designed around the 6pdr and their turret ring was too small (57.2") to mount the gun without crippling fighting efficiency. In the winter of 1941-1942 steps were taken to investigate a tank which could carry the new gun, by March 1942 this had crystallised into the A.30, this reached the prototype stage by August 1942 when production possibilities were being examined. This tank would later be accepted into service as the Challenger in 1944.

Many suggestions had been made for S.P. AT guns, originally it had been hoped that this requirement would be met by the US M10 but by July 1942 it was clear that there was no hope of getting these vehicles in quantity before 1943 so it became imperative to get a S.P. mounting for the 17pdr which was a better gun than the US 3" anyway. Both the Valentine and Crusader were investigated, the Crusader due to its high power to weight ratio and its mobility and the Valentine due to its reliability and low profile. It was decided against the Crusader as it would have required the gun to be mounted in an exposed position with the minimum amount of protection. Other chassis investigated included the Canadian Ram. The Valentine was accepted with a longer term project which involved the Cromwell.

Further work was done on the problems of installing 17pdrs in a tank mounting, the guns were modified considerably to facilitate this work, principally this involved the adoption of a less bulky breech mechanism. In August 1943 the mounting of the 17pdr in a Sherman turret was pressed forward urgently as well as the mounting of 17pdrs in the M10. Firing trials of 17pdr mounted in the Sherman were completed in December 1943 and the first 20 vehicles were converted in January followed by the M10 in March. By the end of May 1944 527 vehicles mounted the 17pdr gun, by end of June this had risen to 831 and by the end of the May 1945 over 4000 vehicles mounted a 17pdr gun, also 743 Comets with a less powerful 17pdr variant had been completed.

The gun mounted on the Comet tank had a smaller breech block to enable it to be fitted inside the turret and cartridges from the 3" AA gun were used. The weapon fired the same projectiles as the regular 17pdr but as the cartridge was different the ammunition was not interchangeable, although the same calibre as the 17pdr the gun was named the 77mm HV in order to prevent confusion over ammunition supplies. The smaller cartridge meant a lower muzzle velocity and thus a decrease in performance compared with a regular 17pdr.

## 17 Pounder Ammunition

## 17 Pounder Anti-Tank Gun

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Both AP and APC ammunition were asked for at the same time in August 1941 with designs being completed by December. The first 10,000 AP rounds were delivered in June 1942 and first filling for service took place in September, first APC ammunition was filled in October 1942. APCBC ammunition was requested in the Summer of 1943 and first deliveries took place in the Spring of 1944. The original HE ammunition was found to be somewhat lacking so a reduced charge version was provided in the Summer of 1944, followed later in the year by a high capacity version. APDS based on the 6pdr APDS design was made available in June 1944 with the first ammunition being filled for service in July.

## 17 Pounder Gun variants

- Mk I - original version
- Mk II - intended for tank use (Challenger)
- Mk III - for navy unused
- Mk IV - for Sherman
- Mk V - for M10
- Mk VI - shorter breech block, for tanks
- Mk VII - for Sherman

## 17 Pounder Carriage and Gun data

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Carriage	Mk I
Weight	4700lb
Gun weight	1820lb
Traverse	30 degrees left and 30 right
Elevation	16.5 degrees
Depression	6.5 degrees
Height (over gun field)	33.25'
Width	88"
Length (tail to muzzle)	289.5"
Bore	76.2mm
Length	154.3" (65 cal)
Rotating	turn in 30"
Sighting	Telescope, No.41, No.51

77mm HV Gun data

Complete gun/break	1502lb
Length (with muzzle break)	125.5"
Bore	76.2mm
Barrel	130 cal
Weight	full charge

17 pdr/77mm Projectiles

Name	Weight	Length	Caliber
High Explosive	121.5lb	35.4"	3.0
High Explosive	121.5lb	35.4"	3.0
Four Piercing	121.5lb	35.4"	3.0
Four Piercing	121.5lb	35.4"	3.0

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Penetrating Shot	2005950	Cap 1.T.
Penetrating Shot	2005951	Cap 4.T.
Penetrating Shot	2005980	Cap 7.T.
A.P.C.B.	1233571	
A.P.D.S.	1.7.625	

Penetration of the 17 pdr and 77mm guns (MQ plate, 30 degrees)

Armoured	2005950	yards
AP	2005951	89
AP	2005954	84
APC	2005981	111
AP	2005982	61
77mm	2005981	90
77mm	2005982	30

17 Pounder Carriage and Gun production by year (UK only)

1945	End of May
5/17 pdr	Carriage
17 pdr	carriage
17 pdr	AT
7 pdr	Tank
7mm	Tank

17 Pounder Ammunition and 77mm production by year (Filled

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only, UK only)

**Ammunition (End of May)**

APBC	18,000
APBC	18,000
APBC	51,000
APDS	37,000
HE HC	67,000 (includes data)
HE RC	16,000
HE HC Super	45,000

77mm Ammunition production by year (Filled only, UK only)

**Ammunition (End of May)**

APBC	18,000
APDS	37,000
HE HC	67,000
HE RC	16,000
HE HC Super	45,000

SOURCE: G. 54 Handbook, 17pdr Handbook, AVIA 46 187,