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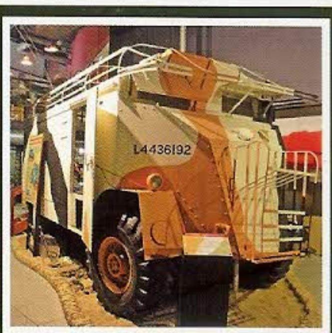

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Desert Crusaders

WE TAKE A LOOK AT THE CRUSADER TANK IN SERVICE WITH THE BRITISH ARMY IN THE DESERT

ABOVE...
Crusader Mk II with the distinctive cast gun mantlet but missing the small auxiliary gun turret, which was often removed and plated over as it was of little use. (Photo – Tank Museum)

As the war raged in the western desert the British Army used a wide range of vehicles, some of which were more suitable than others for desert warfare. Early on in the campaign the British tanks were woefully outgunned by the German tanks and anti-tank guns, which at that time mainly consisted of the Panzer III and IV, but as the war progressed newer and more heavily armed tanks such as the Tiger 1 began to be introduced.

The Crusader tank was amongst the new tanks to be introduced by the British and was one of a range of Cruiser tanks produced in the early war period that took advantage of the then new Christie type suspension system. The Crusader entered service in 1941 with the first consignment of the new Crusader Mk I tanks being supplied to the 6th Royal Tank Regiment who at that time were serving in the Middle East. A short time later, and with Crusader production in full swing, more tanks were shipped out to 22nd Armoured Brigade to bolster numbers in the desert, and went on to see widespread service in Tunisia and the battle of El Alamein with varying

LEFT...

An early Crusader, probably a Mk I as the small front turret is just visible, drives up on to the bed of a Scammell tank transporter's trailer. This vehicle is fitted with the wheel covers, giving the appearance of solid road wheels. (Photo – Tank Museum)

LEFT...

Another early Crusader fitted with the solid wheel covers seen here on a six-wheeled truck transporter. The truck looks to be an American White Ruxtall 922 18-ton 6x4. (Photo – Tank Museum)

BELOW...

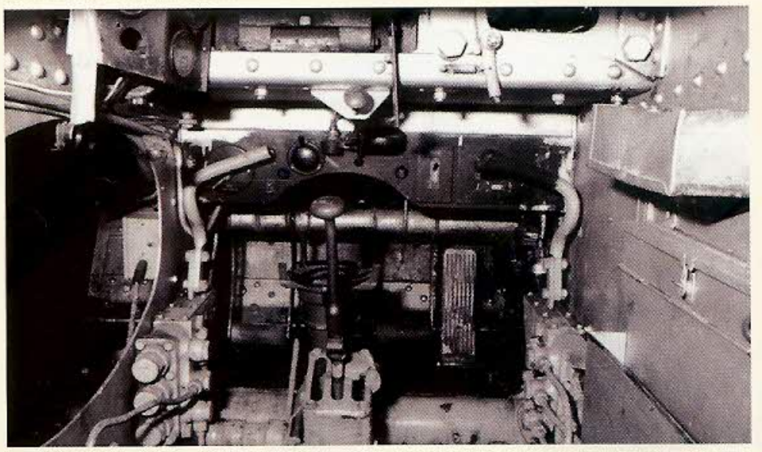
A Crusader Mk II undergoes some maintenance or repair in the desert. Note the field repair truck in front of the tank and the various items of stowage on the engine decking. (Photo – Tank Museum)

degrees of success as well as the European theatre of operations.

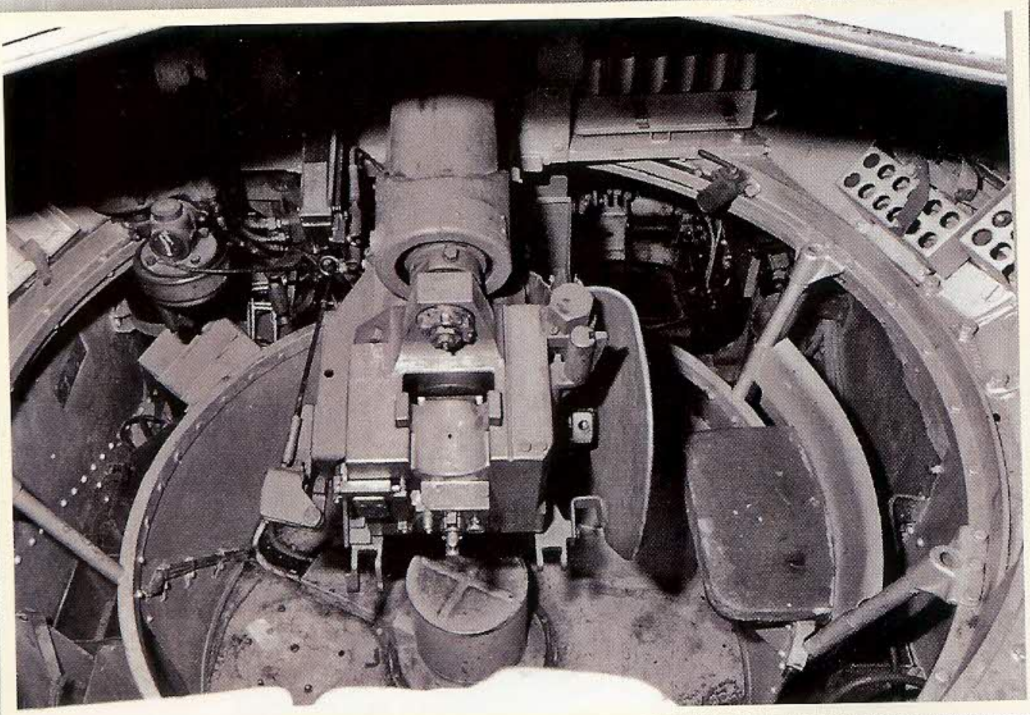
Unfortunately the Crusader was dogged by a number of reliability problems throughout its service life, some of which were undoubtedly due to the extreme heat of the desert, but others were caused by poor preparation of the vehicles when shipping them out to the frontline that saw them exposed to the harsh and corrosive elements of the sea during the journey to the frontline. This resulted in corrosion damage from the salt water spray and meant that most of the tanks needed to be repaired and serviced by the base workshops in Alexandria before they could be passed on to the units, which caused delays in getting the tanks to the battlefield, however, one of the main concerns was the way that the tanks were prone to catching fire when hit by the enemy.

It was always known that the armour on the Crusader was quite thin, especially when compared to their German counterparts, but despite this it was initially assumed that the petrol-powered

RIGHT...
View looking inside the driver's position of a Crusader Mk III. The two steering levers can be seen either side of the central gear stick. (Photo – Tank Museum)



BELOW...
View looking down inside the turret of a Crusader Mk III showing the gun breech, gunner's seat and turret basket. (Photo – Tank Museum)



BELOW...
Pluto 6, a Crusader II, pictured here in the western desert undergoing repairs. The canvas roof of a repair truck can just be seen to the far side of the tank. A seat from inside the tank is propped up to the side and an ammunition box has been attached to the side skirt for extra stowage. (Photo – Tank Museum)

tanks caught fire easily because of the type of fuel used, but further investigations revealed that the main cause was actually the cordite ammunition being used, which was stowed in unprotected racks within the hull interior and when the tank was hit, the hot metal fragments would hit and ignite the ammunition with disastrous results.

The Crusader was an important vehicle in terms of British tank development, being relatively quick, reasonably well armoured (in comparison to the inter-war tanks) and with a lower profile than previous tanks, in fact the Crusader would ultimately go on to become one of Britain's 'Classic' wartime tanks despite its shortcomings.

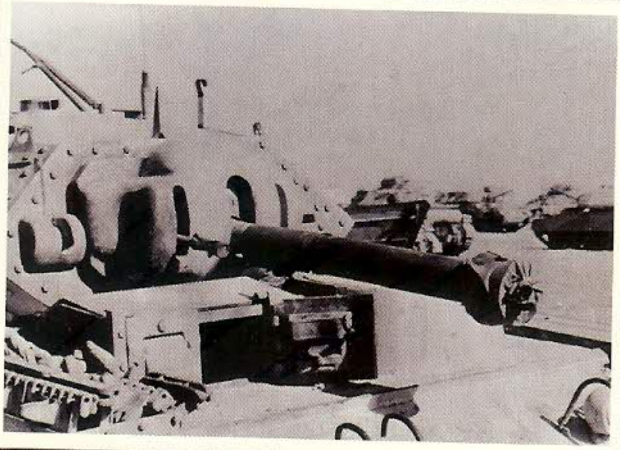
The Crusader, like the Covenanter and some of the Cruiser family of tanks before it, incorporated steeply sloped turret armour to improve survivability by reducing the height of the vehicle, but also allowing shells to glance off the turret armour rather than detonating. Unfortunately the resulting undercut of the turret also created a shell trap and was the cause of the demise of many Crusaders during the war.

PRODUCTION

It is often said that the Crusader tank was a development of the similar Covenanter tank, however, the Crusader was actually developed alongside the Covenanter as a separate design, and while it was loosely based on an enlarged design that incorporated a number of common components, it was very different having been based around a different engine, namely a modified version of the 27-litre Nuffield Liberty V12 petrol engine.

The Crusader was distinguished from the Covenanter by the addition of an extra road wheel on either side of the hull, increasing the number to five per side, although the overall dimensions of the two tanks changed little due to the road wheels being spaced more closely together than on the Covenanter. Early versions of the Crusader were often seen fitted with the same solid wheel covers first seen on the Covenanter, creating further confusion as to the lineage of the Crusader and the initial prototype even incorporated a single, centrally located headlight, like the Covenanter but was later replaced by twin headlights on production models.

The first version, the Crusader Mk I, was fitted with a small, hand operated circular auxiliary turret to the left of the driver that housed a Besa machine gun to supplement the 2-pounder main gun in the turret, but this turret was found to be less than successful, being too small and restrictive to be of any great use and a great many tanks had them removed with the aperture in the hull being plated over, or they were simply not used. The auxiliary turret was not included on the later marks of Crusader tank, but even so the fact that these turrets were often removed from earlier types can create confusion when trying to identify specific types of Crusader in photographs.

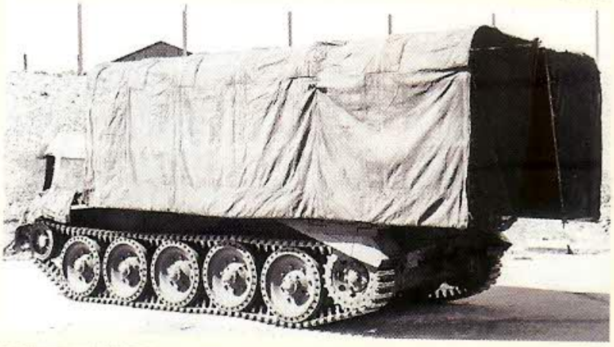


LEFT...

A Crusader Mk II command tank is seen here fitted with a dummy gun sleeve to give the appearance of a 6-pounder and divert attention away from itself as a command tank. (Photo – Tank Museum)

BELOW...

The wide open spaces of the desert could see travelling columns of tanks being picked off from a long distance by enemy guns. In an effort to disguise the tanks some were fitted with frames fitted with a canvas to make them look like trucks. (Photo – Tank Museum)



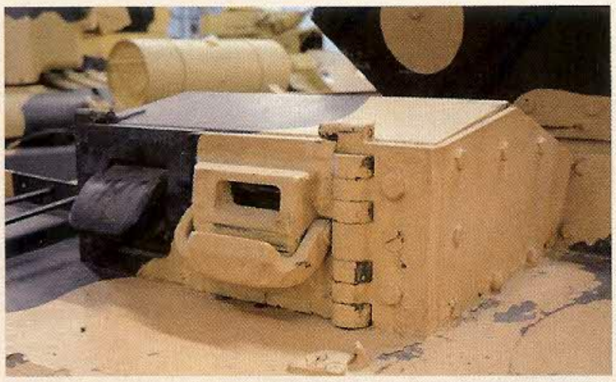
BELOW...

In an effort to disguise the tanks some were fitted with frames fitted with a canvas to make them look like trucks. (Photo – Tank Museum)

The engine used in the Crusader was the powerful Nuffield Liberty V12 configuration petrol engine that developed 340bhp at 1500rpm. The engine certainly gave the tank a good turn of speed, but reliability and cooling problems relating to the method of construction caused all manner of problems when operating in the desert. The engine was not of conventional design and didn't have

BELOW...

This Crusader Mk II has been knocked out in fierce fighting during the desert campaign, the small auxiliary turret can be seen to the front of the vehicle on its side. (Photo – Tank Museum)



ABOVE...
Later marks of Crusader saw the removal of the small auxiliary turret. The circular blanking plate can be seen to side of the driver's hatch.

ABOVE RIGHT...
The introduction of the Crusader saw an extra road wheel being added each side of the tank, bringing the number up to five rather than the four seen on early Cruiser tanks.

BELOW...
Rear three-quarter view of the Crusader III Cruiser tank Mk VI currently displayed at the Tank Museum and described as a fast but unreliable desert veteran.

a single cast cylinder block and when working under stress the separate cylinders used on the engine would start to move, only fractionally, but enough to cause oil and water leaks and even fractures, and this coupled to problems with the exposed chain driven fans and sand ingress into the air and water systems resulted in an altogether unreliable tank in the harsh desert environment.

The crew of the Mk I and Mk II consisted of five crewmembers, which was later reduced to three with the introduction of the larger 57mm/6-pounder gun on the Mk III. The driver sat to the right of the forward compartment and the driver controls took the form of two steering levers with the gear lever in between the two with the clutch, brake and accelerator pedals laid out in conventional format. The remaining crewmembers were situated in the main turret with one in the small auxiliary turret beside the driver on early marks, although it wasn't unusual for the auxiliary turret gunner to stand in the turret rather than operate the cramped turret on the early types.

A co-axial Besa machine gun was also mounted alongside the main gun in the turret, while the 2-pounder gun, which performed poorly against the German tanks, was later replaced by a 57mm/6-pounder in the Crusader Mk III. The introduction of the larger main gun also saw the distinctive cast gun mantlet of rounded form on the Mk I and Mk II replaced by a flat plate with a simple aperture for the main gun and co-axial machine gun. The single slide back roof hatch at the rear of the turret on the Mk I and Mk II was also replaced by twin lift up roof hatches on the Mk III Crusader.

The first production model entered service in 1941, but was soon replaced by the upgraded Mk II, which saw an increase in armour thickness over the Mk I, but retained the same inadequate 2-pounder main gun and little was done to improve the reliability of the tank, especially in terms of the overheating problems when operating in the desert.

There are very few ways to easily distinguish the Mk I from the Mk II Crusader, especially when the auxiliary turret was removed, however, by studying the front turret plate carefully it is possible to identify the one from the other. To the left of the main gun was a small gunner's spy hole that had a small piece of coaming around it and on the Mk II it is virtually flush due to the addition of thicker armour plate, whereas on the Mk I the coaming stands proud.

Other identification points were the differences in the design of the side skirts, which on early Crusaders only covered a small portion of the forward running gear and some of the rear from around halfway back. On later models deeper, full-length side skirts were fitted, but having said all that it was common for the skirts to be removed from the vehicle completely depending on their condition and the terrain in which the tanks were being operated, thus confusing identification between the early marks.

Different types of air cleaner systems were used throughout production, which can be another way of determining the type of Crusader, assuming of course that they are visible in the photos in the first place. The later type is perhaps the most commonly seen and features sets of 'snail' type inlets either end of a rectangular box at the rear of the mudguards with a main pipe leading to the engine cover.

RIGHT...
A familiar sight in the early part of the desert war – British Crusader tanks with their distinctive profile head across the desert. (Photo – Tank Museum)

LEFT...
The Crusader Mk III was arguably the best of the Crusader family, but it often proved unreliable and was outgunned by the German panzers and soon replaced by the American Sherman tank.

BELOW LEFT...
Stowage space for the crew's kit was always at a premium in a tank and this additional stowage bin was added to the rear of the Crusader tank. The aerial mount and searchlight can also be seen in this view of the Crusader III at the Tank Museum.

ABOVE...
The only other place I have seen a preserved example of the Crusader in recent years is IWM Duxford. This photo was taken at one of their military vehicle shows some years ago and offered a rare chance to see this early Crusader outdoors.

END OF LIFE

Despite the fact that around 5,300 Crusaders were built during WW2, it was quickly phased out of frontline service in favour of the newer American Sherman tanks that were being supplied due to ongoing reliability issues with the Crusaders, and the fielding of the new Tiger 1 tank by the Germans.

Even after being removed from service the Crusaders went on to be adapted and used for a number of other roles, such as anti-aircraft tanks with new, purpose-designed turrets as well as turretless gun tractors and engineer vehicles such as the Armoured Recovery Vehicle and the Crusader dozer. Numerous prototypes were built, but only a few of the ideas ever reached production.

While not a huge success in service, the Crusader was undoubtedly an important tank at a key point in the war and saw sterling service. Today there are a few preserved examples to be found in various museums around the world, with our very own Tank Museum home to a Mk III model.