

## The invasion of Normandy and the Red Ball Express (1944)

Getting supplies to the Allied forces was a crucial part of the Normandy Landings and the breakout from Normandy. The supply chains from the USA to the beaches in France were changed drastically, numerous times during the campaign and in the end it was the Red Ball Express, an improvised system of truck convoys, that got the supplies to the fast-advancing troops on the frontlines.

By Martijn Lofvers

# D-Day: planning and execution

**T**he Allied invasion of Normandy was not just about D-Day. Although that one day was a decisive part of the invasion as a whole, the gargantuan Operation Overlord actually comprised two different phases. The first phase consisted of the assembly of the troops in England that would be needed for the invasion. The second phase was all about the battle on the beaches and in the hinterlands, the vital breakout and the planned advance to Paris. The whole operation could be compared to an important product launch: first of all planning and assembling the goods, then winning market share post

product launch in different market areas along with the need to maintain supply to successful markets.

Operation Overlord was not the Allies' first invasion in northern France. Before June 1944, the Allies had carried out a number of amphibious landings with varying success. The first attempt, on the beaches near the town of Dieppe in 1942, ended disastrously. More than 6,000 infantry soldiers, mainly Canadians, landed on 19 August with orders to capture an important harbour just for a short period of time, gain intelligence from

prisoners of war and analyse the German response. The Allies failed to achieve any of these goals: almost 60 per cent of the soldiers were killed or taken prisoner and more than 100 aeroplanes were lost. There were lots of wise lessons to be learned during this failed operation. Capturing a harbour unscathed was apparently impossible and alternatives were needed for getting new supplies to the troops once they had landed. The British developed a series of special tanks and armoured vehicles and prefabricated floating harbours (Mulberries) for the invasion of Normandy. Communication from out at sea to the

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coast was improved and additional – and bigger – ships were brought in for attacking the coastal areas.

## Assembling the troops

The preparations for Operation Overlord started as early as 1942. Between January and June 1944, the United States transported a total of 17 million tonnes of military equipment (including almost 400,000 litres of blood plasma) and hundreds of thousands of soldiers to Great Britain. The various Allied forces rehearsed their roles in the eventual landings for months on end. During one of these exercises on the English coast on 29 April 1944, around 700 American soldiers and sailors were killed when they were caught by surprise by German torpedo boats.

The day of the invasion, D-Day, was to be the biggest one-day amphibious landing of all time. To get 130,000 soldiers to the beaches, they would need 6,900 ships, of which 4,100 were landing craft. In total, 1,200 aeroplanes would be supporting the landings, including 1,000 cargo planes carrying three divisions of the air force and their 15,500 parachutists. The Allied Air Force was to drop 10,000 tonnes of bombs on the German coastal defences and carry out 14,000 air attacks.

Only a few days of the month would be suitable for the landings. Firstly, a full moon was essential for identifying and marking orientation points from the air for pilots, parachute regiments and gliders. The second condition was the spring tide – this meant that the water would be at its deepest, enabling the landing craft to navigate past defensive obstacles as safely as possible. Based on these conditions, Supreme Commander Dwight Eisenhower chose 5 June for D-Day.

On Thursday 1 June, a few hundred amphibious tanks and the 130,000 soldiers started boarding the ships in a process which was expected to take two days to complete. However on the very same day, weather stations detected a number of areas of low pressure over the North Atlantic. If seas were rough on the English Channel, it would cause the landing craft to capsize, and bad weather

would prevent the Allied air force and navy from bombing the German coastal batteries and defences prior to the landings. Moreover, the battleships and convoys only had enough capacity to turn around once before having to refuel. Eventually, based on the most recent weather forecasts, Supreme Commander Eisenhower postponed the landings by 24 hours: D-Day was instead to take place on 6 June 1944.

## Mulberry Harbours

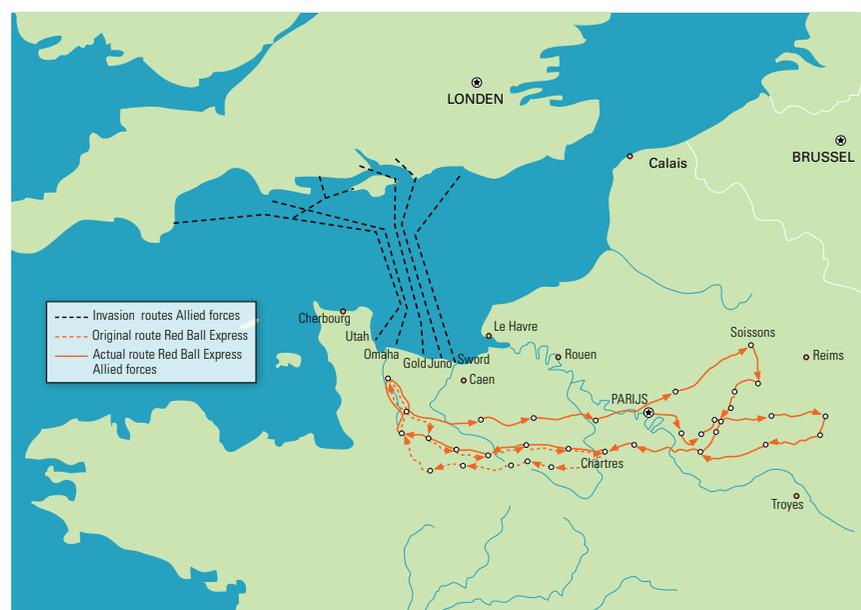
Despite substantial losses, especially on Omaha Beach, the landings were more successful than the Allies had hoped for or expected. In order secure Normandy, the Allies now had to get more divisions and sufficient supplies on land as quickly as possible before Hitler could deploy the strong panzer divisions from various coastal areas against the invading forces. However, the Americans struggled to get sufficient supplies onto land: in the first three days, only 6,614 tonnes of the planned 24,850 tonnes were delivered, while an average American division needed approximately 500 tonnes of supplies per day.

Three days after D-Day, the two artificial harbours were installed, each constructed from 600,000 tonnes of concrete: Mulberry A at Omaha Beach and Mulberry B at Gold Beach off the coast of Arromanches. However, a severe storm on 19 June destroyed the harbour at Omaha Beach prematurely because it had not been anchored to the seabed firmly enough. Meanwhile, Mulberry B was used for a total of eight months despite having been designed to be deployed for only three.

It also took the American army longer than expected to capture the harbour in Cherbourg, Normandy, and subsequently make it fit for purpose. For this reason, in the first months after the landings, 80 per cent of American supplies had to be transported across the sand. Trucks were used to ship goods from the open-air storage areas on the beaches near the frontlines. On their return journeys, they carried prisoners of war, and the bodies of dead soldiers travelled at the back of the convoys.

The ability to adapt the supply chains that were running from the US via Great Britain to France remained of strategic importance. Despite 289,827 tonnes of

## SAILING ROUTES AND SUPPLY LINES ALLIED FORCES



A round trip from Omaha Beach to Paris with Red Ball Express lasted less than nine hours.

## ► “My men can eat their belts but my tanks need fuel.”

supplies having been unloaded onto the Normandy beaches by the end of June, there were still shortages. The supplies could not be deployed rapidly enough from the British ports and the ships could not return quickly enough from the landing beaches. On 15 June, therefore, the Allies began transporting goods directly from the US to Normandy, thus shortening the supply chain. Eventually, at the beginning of August, the harbour in Cherbourg finally became accessible for the 20,000 tonnes of goods arriving every day. This then paved the way for a different logistics innovation, namely the Pluto oil pipeline that ran along the bottom of the English Channel to the harbour in Cherbourg.

### Red Ball Express

After heavy and difficult fighting in the ‘bocage’ (as lanes lined with tall hedges in the Normandy countryside are called), the Allies finally broke out of Normandy on 1 August during Operation Cobra. The zealous General Patton implemented his own Blitzkrieg with the US 3<sup>rd</sup> Army and managed to cross almost a hundred kilometres of enemy territory in two weeks. His army gained so much ground that on 31 August near the city of Metz, he literally ran out of fuel. Two days later, Patton complained about it to Supreme Commander Eisenhower: “My men can eat their belts but my tanks need fuel.”

Towards the end of August, 90 to 95 per cent of all supplies were still in the depots on the Normandy beaches, almost 450 kilometres from the troops on the front-line. In order to get these goods to the front, the Army Transportation Corps established a system of truck convoys called the Red Ball Express. This was an American railroad phrase referring to the fastest form of supply on the railways. Military police along these fixed routes were able to identify the trucks by the red ball emblems that were painted on their front bumpers. The drivers followed white signs, showing red balls and arrows, that had been put up at every junction along the route. The Red Ball Express could

### RULES FOR DRIVERS

With the Red Ball Express trucks driving around the clock, their drivers had to adhere to strict rules:

- All vehicles must drive in convoy at 60 yard intervals (55 metres);
- Maximum speed is 25 miles an hour (40 km/h);
- No overtaking;
- In the dark, it is permissible to use full headlights rather than the so-called ‘cat eyes’ (blackout headlights that allowed only a small slit of light to shine through);
- Vehicles must stop for a ten-minute break at exactly ten minutes to every hour.

complete the 310 mile round trip from Omaha Beach to Paris in under nine hours.

The Red Ball Express operated for a total of 81 days from 25 August up to and including 16 November 1944. More than 6,000 trucks and 23,000 drivers transported 412,193 tonnes of goods to the advancing American armies, as far as to the German and Belgian borders. During these three months, the Red Ball Express had firmly

established itself in World War II mythology as one of the best wartime examples of the American ‘can do’ mentality. Only one in ten soldiers fought on the frontlines, while the rest took care of supporting and providing supplies to the combat troops. According to General Omar Bradley, commander of the US 1<sup>st</sup> Army, “Logistics was a lifeline for the Allied armies in France. Without supplies, we couldn’t move, shoot or eat.” ◀



**The Red Ball Express was a system of truck convoys. The name was a term used by the railways meaning the fastest form of supply.**