

The paratroopers' *scooter*

Vicky Turner takes a look at the Welbike -
the smallest motorcycle ever used
in service by British armed forces

*'With a simple design it
was relatively easy and
quick to manufacture'*



The Excelsior Welbike, or Parascooter as they are sometimes referred to, came about when the British decided they needed a mechanised means of transport that would enable airborne troops to advance more quickly than on foot. At that time, the British had no aeroplane capable of airlifting Jeeps or other vehicles so motorcycles were identified as a sensible solution. What was needed now was a readily transportable version - one that could fit into a standard parachute container - 1300mm (51in) long by 38cm (15in) high and

30cm (12in) wide. The intention was to either parachute them in alongside paratroopers or land them by glider. By now, the Allies had witnessed the Germans using air-portable motorcycles during the Cretan Campaign, so they knew that it was within the realms of possibility.

Under an initiative driven by the Special Operations Executive (SOE) based at Station IX near Welwyn in Hertfordshire, Harry Lester, an SOE employee and motorcycle enthusiast, and designer Lt Col John Dolphin devised a proto-

type that fitted the bill. This was then sent on to Excelsior Ltd, never a big motorcycle manufacturer (and at this point only taking on contract engineering jobs), to be put into full production.

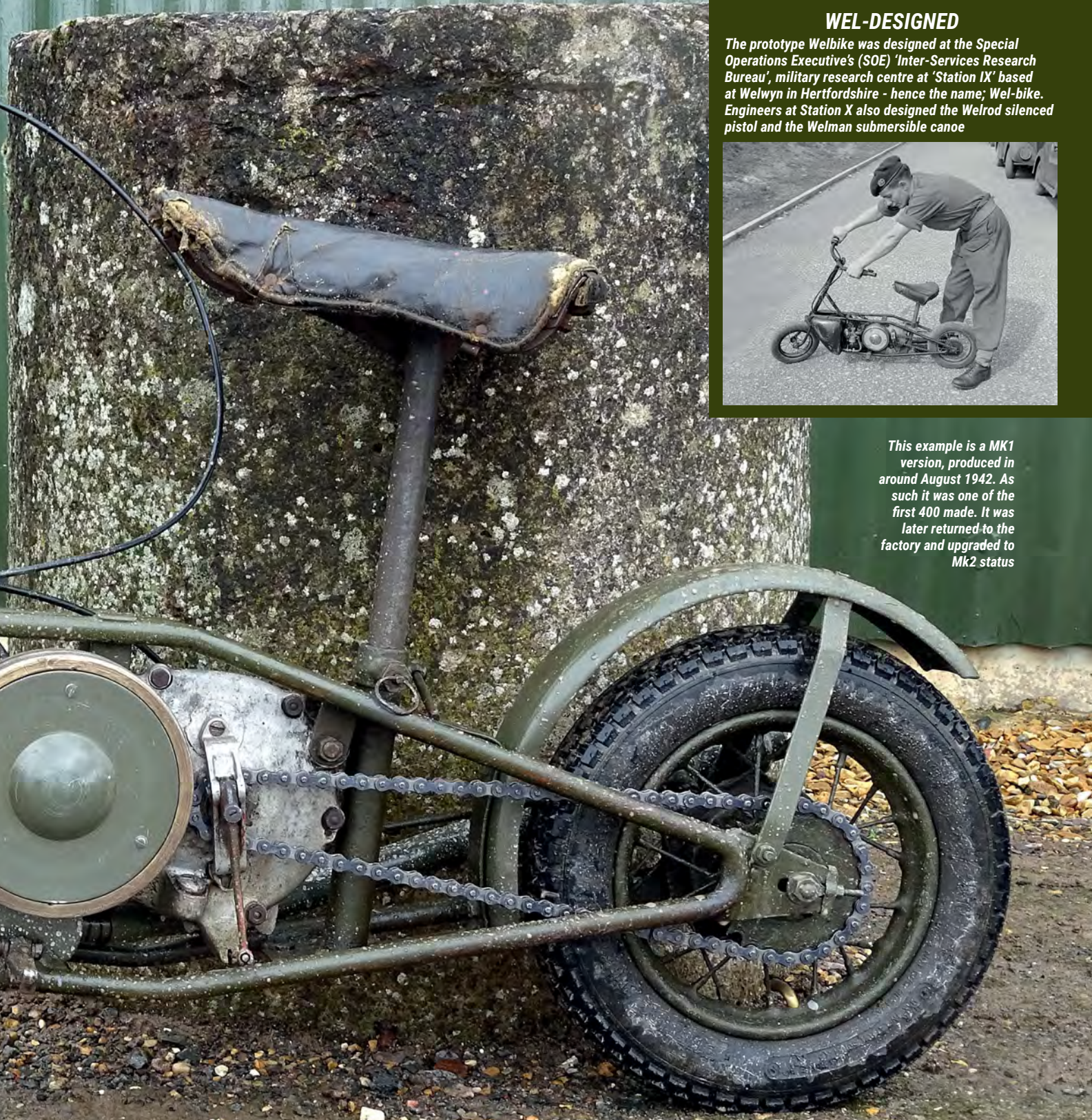
Between 1942-1943 across a number of different contracts, nearly 4,000 units were made of three different versions. The Mk1 was very much like a production version of the first prototype, the Mk2 had a number of modifications, including the addition of a rear mud guard and then finally, the Mk2 Series 2, which had a revised fuel tank layout and an

WEL-DESIGNED

The prototype Welbike was designed at the Special Operations Executive's (SOE) 'Inter-Services Research Bureau', military research centre at 'Station IX' based at Welwyn in Hertfordshire - hence the name; Wel-bike. Engineers at Station X also designed the Welrod silenced pistol and the Welman submersible canoe



This example is a MK1 version, produced in around August 1942. As such it was one of the first 400 made. It was later returned to the factory and upgraded to Mk2 status



SPECIFICATIONS

Make **Excelsior**
Model **Welbike**
Nationality **British**
Year **1942**
Production Run **1942-1943**
Production **3,641** (all Mk's)
Engine **Villiers**
Type **Junior, single**
Fuel **Petrol, oil two-stroke**
Displacement **98cc** (6cu/in)
Transmission **Single-speed**
Type **Chain drive to rear wheel**
Gears **One**
Speed **30mph**
Range **90km**
Fuel Capacity
One gallon
Suspension **None**
Brakes **Pedal**
Wheels **Two**
Tyres **Dunlop Carrier**
12.5x2.25in
Crew/seats **One**

Dimensions(overall)
Length **1.34m** (4ft 3in)
Folded **Width** (12in)
Folded **Height** (15in)
Weight **32kg** (75lbs)

RIGHT: The manufacturer claims a top speed of 30mph but off road, or on tracks this isn't actually achievable
FAR RIGHT: The blue smoke much in evidence and typical of a two-stroke engine

'The designers simply modified standard motorbike components to be collapsible'



improvement in the way that they were filled; previous versions had necessitated the removal of the pressurisation pump which was fiddly and took time.

The Welbike's design is beautifully simple. Taking on board the limitations of the standard airborne packing container, the designers simply modified standard motorbike components to be collapsible; the handlebars could fold down and up, locked into position with a spring loaded pin, the telescopic seat could be pushed all the way down and the pedals folded up

against the body of the bike.

In order to reduce weight, other efforts were made to miniaturise everything - this meant taking out all but the bare essentials - for example it had no suspension or gears, no lights and only a single rear brake. The fuel tanks were kept small; they also had to be positioned low, near the wheels, to meet the constraints of the airborne canisters. With an outlet lower than the carburettor, the fuel could not be gravity fed. This meant that to get petrol going through the engine, the system had to be pressurised by a hand pump built into the tank - all ingenious solutions which overcame the problem of how to airlift potentially hundreds of motorbikes in

small boxes with a percussion head intended to protect the contents within. The finished design did what it set out to do - it folded neatly at an angle into the standard drop container, and it weighed in at a very manageable 32kg.

With a simple design it was relatively easy and quick to manufacture and by 1943 many were in use with ground troops including Royal Commando Units and RAF personnel who had spotted its utility and had adopted it for transport on airfields.

As for its intended use with airborne forces though, it wasn't perhaps as effective as had been hoped. Although a trained paratrooper could get a Welbike out of the packing

WENDY THE WELBIKE

Wendy the Welbike, as it is known, is very original having only been found disused in a barn in 2016 bearing chassis number C4658877 S/N 417. Its current custodian, Ben Brown from Northampton, has

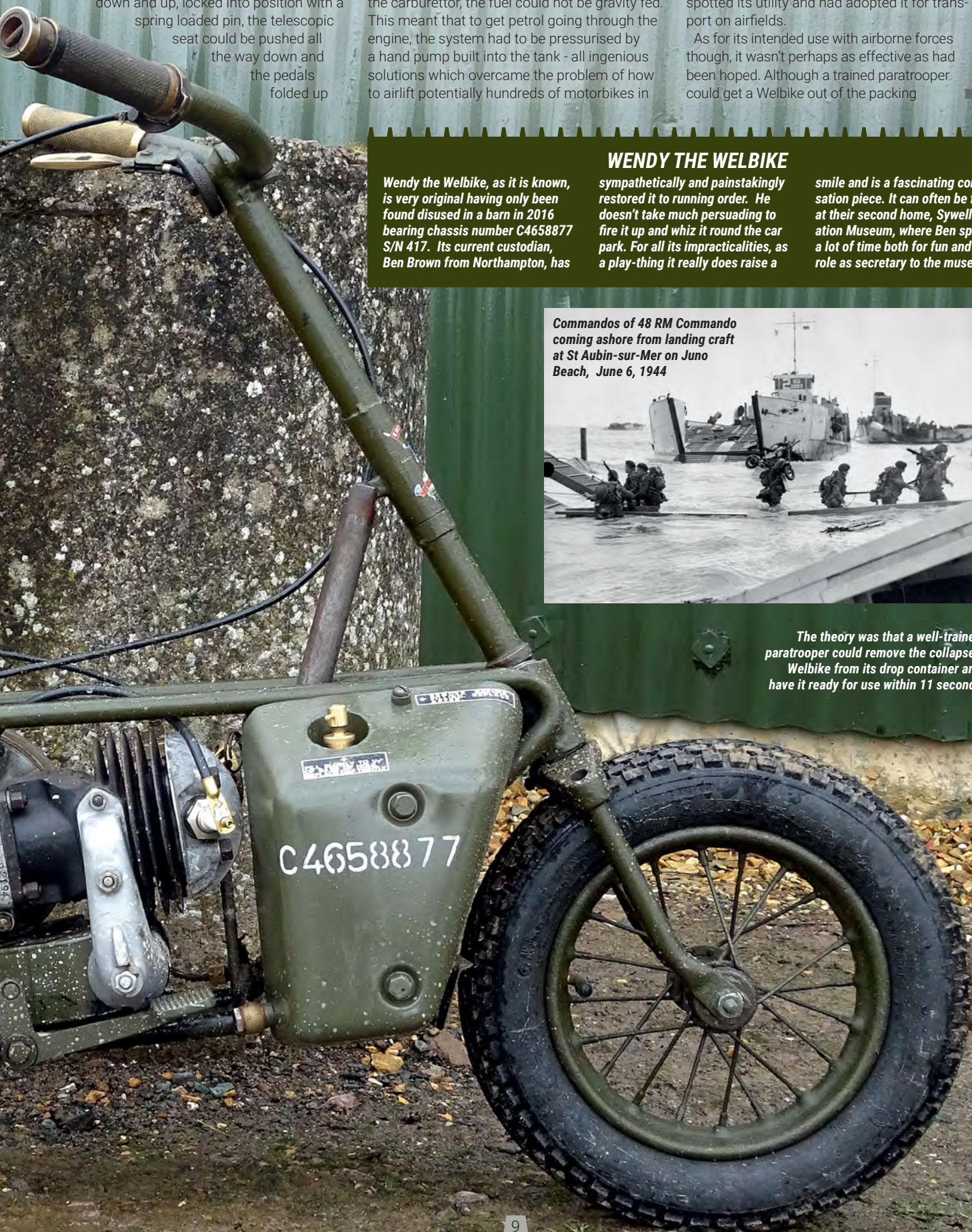
sympathetically and painstakingly restored it to running order. He doesn't take much persuading to fire it up and whiz it round the car park. For all its impracticalities, as a play-thing it really does raise a

smile and is a fascinating conversation piece. It can often be found at their second home, Sywell Aviation Museum, where Ben spends a lot of time both for fun and in his role as secretary to the museum

Commandos of 48 RM Commando coming ashore from landing craft at St Aubin-sur-Mer on Juno Beach, June 6, 1944



The theory was that a well-trained paratrooper could remove the collapsed Welbike from its drop container and have it ready for use within 11 seconds





Original brass and canvas twist grip handlebars and clutch lever. The clutch plate itself is made from cork



The Excelsior Motor Company claim to have been the first British maker of motorcycles for sale to the general public, but were never a major manufacturer



As there is only a foot-operated rear brake and no lights, these motorbikes are not road legal



The pressurised tanks hold just under a gallon of petrol giving a maximum range of 90 miles



Showing the handlebars collapsed, when the steering column is extended the handle bars are fixed in place with a knurled knob



ABOVE: Paratroopers retrieve a Welbike from an equipment container on the drop-zone, during a large-scale airborne forces exercise, April 22, 1944

BELOW: Commandos coming ashore from landing craft at St Aubin-sur-Mer on Juno Beach, June 6, 1944



canister and erected ready for use in around 11 seconds, this was 11 seconds in which he was not running for cover. The ground over which these bikes were intended to travel was the broken battlefield of Western Europe and the small wheels and road tyres soon clogged with mud; the minimal power in the 98cc engine meant that they struggled to cope with the terrain.

Evidentially, the Welbike was well used in training exercises but there is little to suggest that it was widely used in active service. It is known to have been in use on the beaches in Normandy in June 1944 and during Operation Market Garden in September of the same year but most contemporary photographs of the Welbike show paratroopers drill training the unpacking of them and not riding them towards enemy lines.

One factor that probably contributed to this piece of design engineering history not fulfilling its potential, was the RAF bringing online the American DC-3 Dakota, a much bigger transport plane than had been available before, which, along with bigger cargo gliders, enabled the transportation of Jeeps and rendered obsolete the short-ranged, single person Welbike.

Very few of them remain now, probably

because of their impracticality for anything other than being packed away in a parachute canister, but for those with an interest in military vehicle design and development, the 200 or so survivors will always be a fascinating curiosity. Ultimately Welbikes symbolise a time in the 20th century when any technical advantage could have proven to be the difference between winning or losing and demonstrate the innovative lengths armies were prepared to go to in order to find that advantage. ◀

As this is neither a UK road-legal scooter, nor a comfortable ride, Ben straps it to the bumper of his Jeep to transport it to shows

