

The twin-engined 2CV Sahara is a rare beast, but we managed to track one down and drive it where it thrives best: the desert

Words: Paul Wilson Photography: Anton Worts

TRAIL

# SNAIL

The whole thing started so quietly. Let's drive a Citroën 2CV Sahara. The editor suggested one afternoon in the office. In the Sahara. I'd know then what I know now, I'd have kept my hand down.

It was always going to be a difficult job to find a Sahara – Citroën only built a few hundred of these Sixties twin-engined, special-bodied 2CVs and most have disappeared. The hunt became more difficult when I discovered only two exist in the UK. In boxes.

I tried to find one in North Africa, but my dreams of stumbling across the address of a Moroccan Citroën 2CV club soon vanished. Citroën itself couldn't help me and nor could any of the UK 2CV clubs. I was getting desperate. Finally I turned to the internet and after days of surfing I found pictures of a restored Sahara in Israel. Not the easiest place to visit for a photo shoot, but with no better offer, I e-mailed the owner: Can we come and see your rare 2CV Sahara? Oh, and can it be moved to the desert for the pictures and be driven over sand? Amazingly, he wrote back the next day. Even more amazingly he said, yes, no problem.

I was on my way.



## CITROËN 2CV SAHARA

THE CITROËN 2CV had been in production for ten years when the Sahara was announced in 1958. The company had been linked to the desert since the Twenties: a Citroën half-track was the first vehicle to cross the Sahara in 1923. This association continued because Citroëns were sold to French colonies in Africa and the 2CV was popular with drivers contesting the North African rallies (or Raids) that started in 1952.

In the mid-Fifties, the French company conducted market research with oil companies working in desert areas: the results showed that there was a need for a small, light car with powered rear wheels. What was needed was a 4x4 2CV.

Instead of developing a conventional four-wheel-drive system for the car, where one engine drives all four wheels, Citroën decided on a much more straightforward solution: place another engine in what should be the boot to power the back wheels. This may seem mad with the range of 4x4s on sale today, but at the time it was an inspired choice. This car, Citroën figured, would be sold mainly in remote, isolated areas where expert mechanical knowledge would not be available; where complicated 4x4 systems were not ideal.

So Citroën duly created a couple of twin-engined prototypes. An air-cooled, 425cc motor (the 2CV's standard unit at the time) was fitted in the boot, complete with its own gearbox to drive the rear wheels, and a coupling lever connected the two



lid was holed to incorporate the second engine's cooling fan, and where the spare wheel had been moved from its normal position in the boot to a recessed panel on the bonnet. Worryingly, twin fuel-tanks were now inside the car, under the front passenger seats with the fuel fillers poking out from holes cut into the front doors: not the safest idea, especially for the smoking-while-driving addicted French. It also had cutaway rear wings and louvred intakes at the base of the rear quarter pillars.

Although it was named after a large stretch of desert in Africa, it's thought that many of the 694 Saharas – which were built at either Panhard's Ivry factory or Citroën's facility on the west coast of Spain – made their way to Switzerland. Doctors there apparently found its extra traction useful on the ice-covered Alpine roads. The rest found their way to more suitable homes, such as Spain (where 80 were used by the Police) and the Pacific islands, as well as to the Sahara itself. It's also rumoured that 50 were sent by Citroën to Israel for an oil company who were looking to dig a new well. Either way, the country had at least one that I could drive, and there was a desert close by – perfect.

PERFECT, BUT AWKWARD: a call to the Israeli Embassy in London confirms that we will need press passes. Unfortunately, we can only obtain the relevant documents in Jerusalem, and the press office is closed on the only day we can visit.

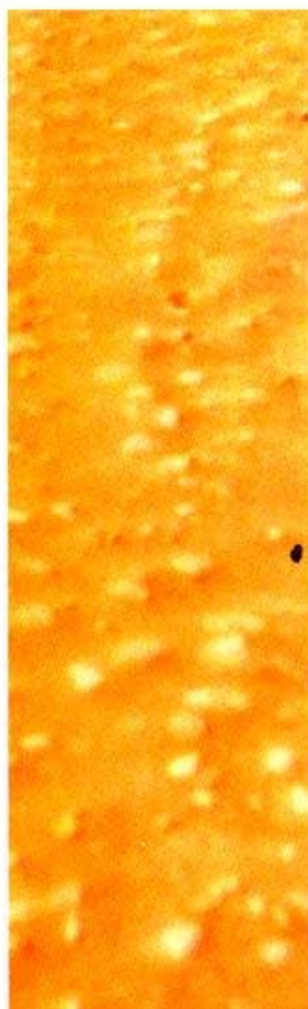
## The desert is no place for fools: if the heat doesn't kill you, the military will

gearboxes to make them work simultaneously. For normal driving, the rear 'box could be shifted into neutral, which meant that the car could be driven by its front engine only.

To fit the extra engine, the company had to completely re-engineer the standard 2CV, especially at the rear. The boot floor had to be cut back to make room for the second motor, and the rear bulkhead had to be reshaped and made removable for easier access. The rear of the car was a mirror of the front: it used the front's axle, engine mountings, and cross members, only turned around. The suspension arms (also from the front) had front hubs welded on so they could take drive. The double clutches worked by hydraulics, instead of the normal cable operation, so they could work together using just one pedal. The suspension was also beefed up to cope with the rough terrain by using independent oscillating arms from the Citroën Ami and heavy-duty bump stops from commercial vehicles.

After preliminary trials, Citroën entrusted the development of the car to the French manufacturer, Panhard. Citroën had bought into the financially challenged company in 1955, and already they were helping to develop and build each other's cars. Panhard constructed two other Sahara prototypes that were subjected to rigorous testing in extreme conditions at a French military site near Fontainebleau, a few kilometres south of Paris.

Finally in 1958, the car was shown to the press at the Mer de Sable, a small sandy area in the Forest of Compiègne, north of Paris. What the press saw was a car that appeared similar to the standard 2CV, but which had clear differences if you looked hard enough. The biggest of these was at the rear, where the boot



With the desire to drive one of these little creatures overtaking common sense, photographer Anton Watts and I land at Tel Aviv airport without accreditation – in the snow! Not the climate you normally associate with this Middle-Eastern country, but Israel was indeed going through the worst weather on record. I begin to think that we should have gone somewhere easier. Such as Blackpool.

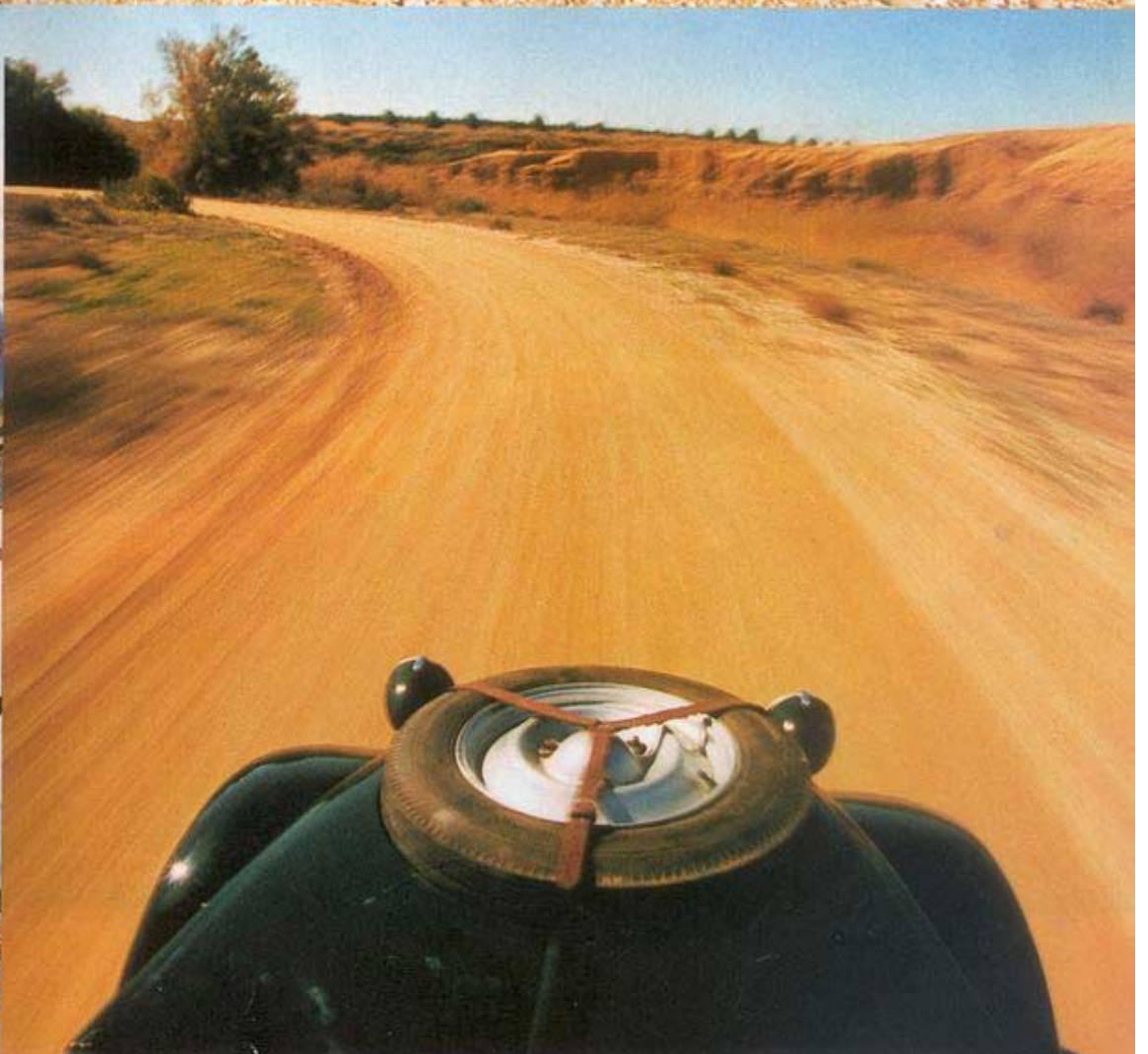
However, on the day of the shoot, blue skies and brilliant sunshine are the order of the day and with the car safely stowed on the truck, we set out for the desert. Because 70% of the Israeli desert is under military rule, we need someone to show us the way: thankfully, we have that someone. Yannai Tobi (who meets us in a yellow Alfa Romeo GTV – cool), has given up his day to take us to suitable locations. The barren Israeli desert is no place for fools: if the heat doesn't kill you, walk into a military zone by mistake and it won't have to...

THE GREEN 2CV we have flown 4000 miles to see is a masterpiece of restoration. When current owner Dov Grodman found it five years ago, there were no Sahara mechanical parts in the car, although its special bodywork had survived, ensuring it stood out from a normal *deux chevaux*. In a previous life, the little car's rear engine, axle and gearbox had been removed but Dov, amazingly, had managed to track down another Sahara in Israel complete with the missing rear parts, but with a rough exterior. After three years of evenings and weekends spent bringing the two Saharas and a standard car together, the car was finished.

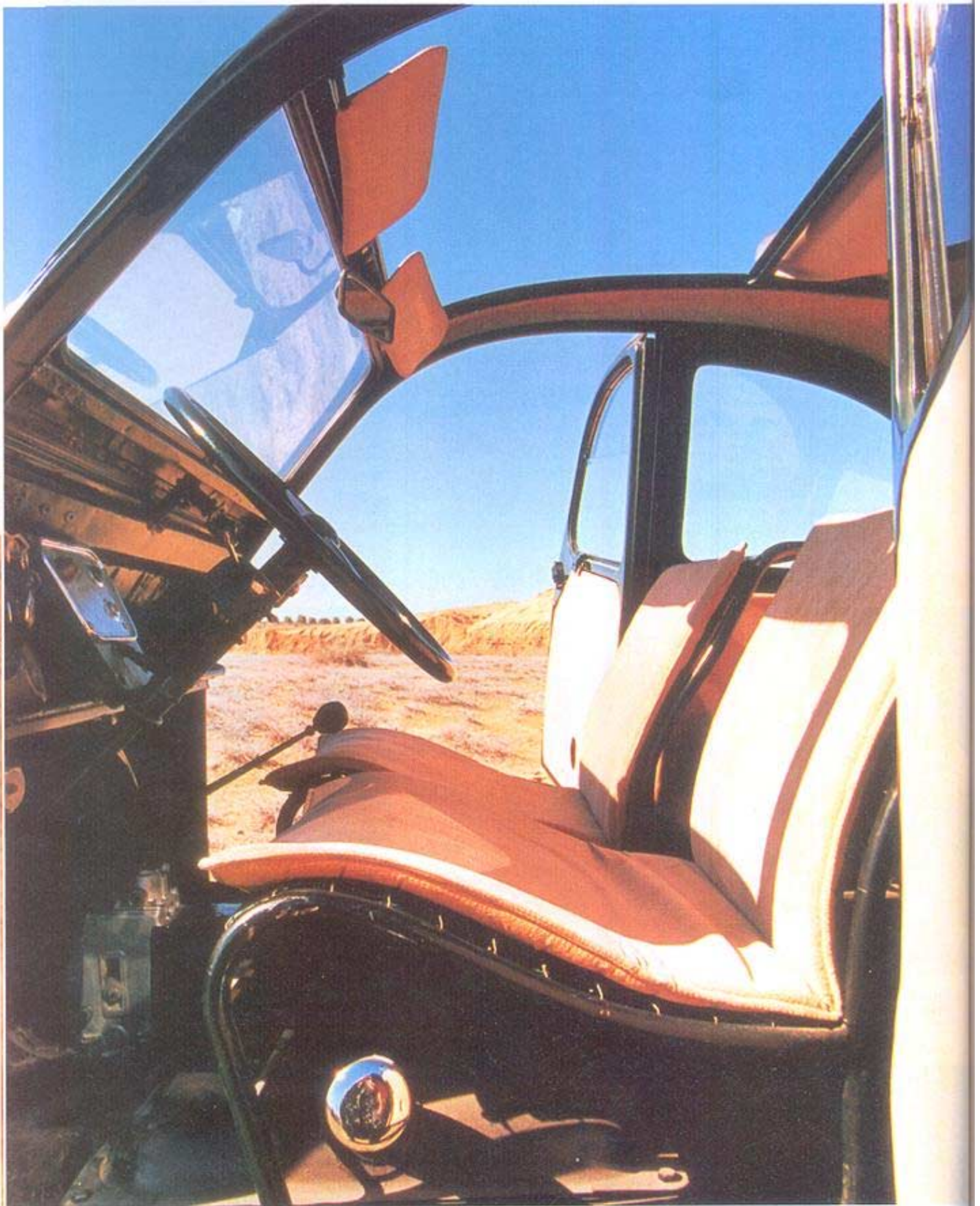
Too much hassle for a 2CV? For a normal model, perhaps, but bearing in mind that it's thought only 27 exist in the world of the 694 built between 1958 ▶



Sahara was inspired by Fifties French oil companies' need for an all-wheel drive vehicle on inhospitable terrain. The result: two engines, front and rear, that pull in the same direction



## CITROËN 2CV SAHARA



and 1966, it's easy to see why Dow went to so much trouble. The car is irreplaceable, and yet Dow quite happily lets us transport the car away for the day and drive it on the sand. However, because he is unaware of the problems I have had finding one of these cars, he can't understand why we want to come all this way for just two days. If an Israeli wanted to come and drive a Bedford Beagle in the West Midlands, you'd think they were mad. Dow is convinced we are.

Mad or not, after two months of organising, hundreds of phone calls, faxes and threats, a four-hour flight to Israel, then a four-hour drive to the desert, I am finally about to drive this small, French rarity over the worst terrain imaginable.

I climb inside through the suicide doors and look around. Citroën obviously worked on a 'less is more' theory when developing the car. The doors, complete with a hole in the middle for the fuel fillers, are paper thin and the interior catch is exposed for all to see. The removable seats are simple metal frames with thin cushions stuck on top, though thanks to the amount of springs in the frames, they're quite comfortable when you bounce around. Dashboard? Don't make me laugh: there are three warning lights and a speedo. But the Sahara, like all 2CVs, has excellent air conditioning – simply roll back the full length canvas roof to let the fresh air in and the sun burn your head.

I look to start the engines, but I see something I've never seen before in a car: two ignitions and two starter buttons. Because the two motors are independent of each other, they need to be started separately, so it's the left key for the front and the right key for the rear. It's a little strange turning the right key when you can already hear a motor running. The gearstick is floor-mounted (instead of the standard's dash-mounted umbrella stick) with the gearbox tunnel running from back to front in the interior. To join the two gearboxes together, you push a small lever situated on the right-hand side of the gearbox tunnel, and as it pushes the rear gearbox out of neutral, the car suddenly becomes all-wheel drive.

Dow had admitted to me that morning that he didn't use his cars nearly often enough. It's because of this, or the fact that I'm in a 40-year-old twin-engined car with two hydraulic clutches, that the left pedal is such a pain. It's either on or off: raise your ankle a millimetre and the clutch is instantly off, making the nose of the little car raise up on its suspension like a ship's bow in bad weather.

There's no sound-deadening at all in this car: the front bulkhead, door frames, body frame and all other metal parts of the car are on show. It makes for a noisy ride when I drive away, especially when I put my foot down and the two tiny 425cc engines begin to work hard – it sounds like two marbles rattling around inside a biscuit tin. Although there are two engines and two starter buttons, there's only one accelerator pedal. Citroën, thankfully, designed this car for people without extra legs. For them to be able to do this, the two carburetors are linked by a cable and work simultaneously when the throttle is depressed.

I feel like some intrepid Fifties adventurer as I look through the flat screen over the spare wheel at the arid desert, the sound of rocks and stones bouncing off the wheelarches. The hot Middle-Eastern sun is beating down on me and there's a taste of sand in my mouth. Unfortunately, this image is ruined when I grind the gears because of that clutch pedal: I have to press the pedal all the way down before it will bite. First is a dogleg and it takes several attempts to find second: it's up, across to the right what feels like four gearboxes' worth of travel, and then up again. To start with, I'm very gentle with the gears, trying to ease the stick slowly, but after much encouragement from Yannai, I realise that you need to be tough and slam it into gear: remember, I'm changing two gearboxes here.

As we follow the rough track, the four-wheel drive is barely noticeable because all 2CVs can pass over uneven terrain thanks to their independent

suspension and front-wheel drive. However, the other motor comes into its own when we are faced by a steep climb.

Saharas were always famous for their climbing ability and in 1964 a press stunt showed this ▶

## SAND AND THE CHEVRON

For 80 years, Citroën and its innovative cars have been linked with desert crossings and mad-cap expeditions

In the Twenties, Citroën developed a caterpillar half-track on the 10hp B2 model chassis, which had the ability to cross any terrain. The caterpillar system had been developed for the Tsar of Russia by his personal mechanic, a Frenchman called Adolphe Kégresse, in 1913. The Tsar had wanted a way to use his vehicles in the tough Russian winter.

Unfortunately, with the outbreak of the Bolshevik Revolution, Kégresse was forced back to Paris where he soon contacted André Citroën, who quickly realised the potential of Kégresse's track system and bought the rights to the design.

By 1920, Citroën saw that here was a vehicle the French military could use in their barren North Africa colonies. To prove this, Citroën proposed the first crossing of the Sahara in a motor vehicle: a Citroën half-track.

In December 1923, five Citroëns set out on a 4000-mile, 40-day journey over the sand dunes of the Sahara. The trip was a success and André Citroën summed it up by saying 'Le chameau est mort – la Citroën le remplace': ie, the Citroën would replace the camel.

On the success of this, Citroën's half-tracks were used on many African adventures in the Twenties as well as a trip to Asia in the Thirties. A half-track was also taken to the frozen wastes of Alaska in 1934.

Citroën's links with desert expeditions continued into the Fifties. In 1952, the first long-distance rally, or 'Raid', took place, with a route



## When I put my foot down, it sounds like two marbles rattling around in a biscuit tin

around the dirt tracks of the Mediterranean. Although a Jeep or Land Rover stood a better chance of winning, they were expensive to buy and run, and complicated to repair.

For this reason, Michel Bernier, a Citroën agent's employee, took part in a 375cc 2CV. He completed the course without incident, and the following year took part again.

Bernier's exploits proved what the 2CV could do, and inspired other people to use the car for exploration. Between 1958 and 1959, it became the first French car to be driven around the world, passing through 50 countries and covering 1,000,000km.

By the late Sixties, Citroën had realised that a lot of people wanted to take their cars on expeditions, and began organising its own Raids. The first, in 1969, from Liège to Dakar and back, covered 2485 miles: the second, in 1970, was tougher, with the final destination in Afghanistan. These Raids continued until 1973.

The Citroën DS was also used in rallies and expeditions, with the highlight a win in the 1973 World Cup Rally. Citroën was also the only manufacturer to have all its cars finish.

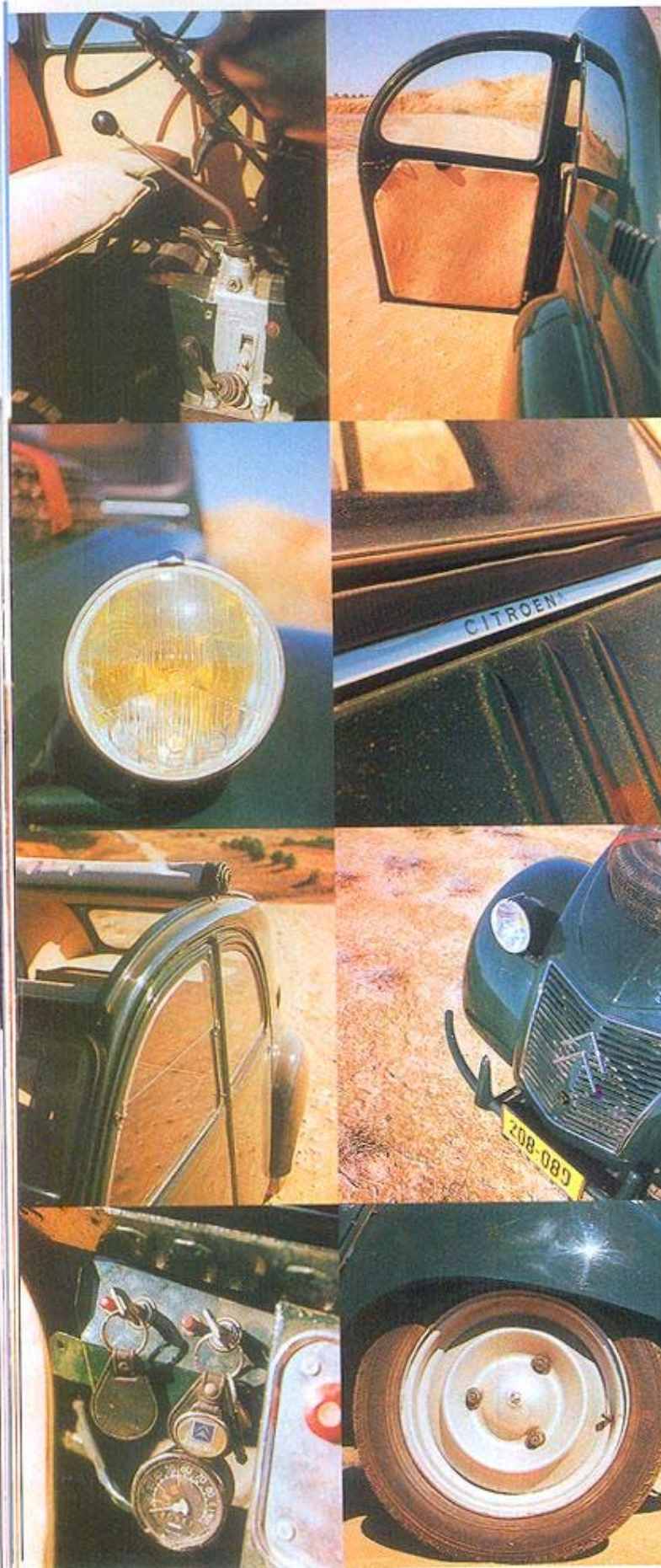
Unable to keep away from its heritage, the French company made a return to the sand in the Nineties. From 1990 to 1997, the Citroën Rallye Raid took part in the Cross Country World Championship. The car won 36 out of 42 races and took five consecutive World Cups for cross country rallying, continuing Citroën's long tradition of conquering the desert.



Citroën in Africa: well-prepared 2CV on a desert Raid, and an airborne CX

With two engines to feed, plenty of fuel is required and, disturbingly, you'll find it all under the seats – the sturdy yet slightly undercushioned seats

## CITROËN 2CV SAHARA

1960  
CITROËN 2CV  
SAHARA

## Engines

Two-cylinder, 425cc  
engines mounted  
front and rear

**Power and torque**  
2x130hp @ 4500rpm  
2x18lb ft @ 2500-  
3500rpm

**Transmission**  
Four-speed manual,  
four-wheel drive

## Brakes

Drums all round

## Suspension

Oscillating arms on  
each independent  
wheel

## Weight

1576lb (715kg)

## Performance

Top speed 62mph  
0-60mph never tested

## Cost new

£1300 (approx)

## Cost now

£15,000

to the full. A standard Sahara was driven up the 360ft Pyla sand dune on the southwest coast of France, coping with a gradient of up to 1 in 1.6.

I'll come clean: the climb that faces us now is not nearly as big as that dune in France, but sat in this tiny little car in the middle of nowhere, it is big enough. However, with two lots of 13hp (the standard 425cc engine's power output) under my foot, the little green car scurries to the top, its four wheels finding traction on the sandy track, the engines providing plenty of torque.

On the way down, things aren't so peachy. As we tip over the other side of this mini Ayres Rock, I find the four drum brakes unresponsive and they grate loudly as I push the stiff pedal down. Sticking my foot out to let my boots do the work would have been more successful. I try to change down to slow us a little, but that damn clutch makes it difficult and so we rush, rollercoaster style, down the other side, the engines screaming loudly. Sorry Dov.

Since the story's inception, I'd had nightmares of leaving Israel having reduced the world's population of Saharas to 26 by driving into a sand dune, down a ditch or wrapping it around a palm tree. So, I drive the Sahara slowly, passing over each rock carefully.

On the way back to the truck, Yannai gets behind the wheel and puts his foot down: we cross the wasteland at a steady 60kph, bouncing over the rough track with a stream of dust following close behind.

"This is how they should be driven," he yells, grinning at me when we ricochet off a rock so big Neil Armstrong would have declined to bring it home. He's right of course: the ride is much smoother now, the independent suspension soaking up the bumps much more easily - this car really was made for the desert.

BY EARLY EVENING, the job is done. With the car loaded onto the truck, we make our way back to Tel Aviv and back to civilisation. It has been a good day - we haven't been shot, and the car is still in one piece.

Exactly 24 hours later, my nerves aren't. Israel's border security is ultra-tight, as Anton and I find out while checking in for our flight home. We face endless questions about who we are, where we have been, has anyone given us anything, what have we done, did we pack our own luggage etc etc. For two hours we stand there answering questions, watching as our luggage is searched and re-searched, feeling the nervous sweat trickle down our necks. For some reason, flying out to Israel for two days to drive a 2CV seems a little suspicious...

Eventually, convinced at last that we weren't terrorists, they let us board. At eight in the evening on one of British Airways' Boeing 777s somewhere over Zurich, I reflect on our trip and car I have just driven.

How ironic that while modern 4x4s have bigger engines, satellite navigation equipment and air conditioning, they are ultimately designed with road use in mind: while the 40-year-old little Sahara, with its two tiny engines, canvas roof and floor-mounted fuel tanks, existed purely to travel the desert. In an environment where a breakdown could be disastrous, I know which I'd rather have.

The Sahara really does rule the Sahara.

**Thanks to:** Sahara owner Dov Grodman, Yannai Tobi for showing us the way, and Simon Day at the Tin Snail Company (01903 823 880).

There's no point in tripping on a car that's designed to be used in the desert, just simple maintainable mechanics and enough power to scale sand dunes. Though there are two ignitions and two starter buttons, by linking carburetors and using cunning hydraulics only one clutch and one accelerator pedal are needed

