

# VOYAGES OF DISCOVERY

In 1990 Land Rover converted a V8 press launch Discovery into a diesel-powered amphibious vehicle for Cowes Week. We tell its story for the first time...



Setting off from the Société Nautique de Genève in 2012

Land Rover's guests in 2012 included explorers Sir Ranulph Fiennes (left) and Ben Saunders, here being piloted by Richard Mumford. On the right is Mark Cameron, who is now Brand Director for Defender



**"O**n its maiden voyage it almost came to grief," Roger Crathorne tells me, recalling the day in 1990 when the newly converted Amphibious Discovery set sail for the very first time. The location was Pendigo Lake at Birmingham's National Exhibition Centre. "It was immediately obvious that the long airbags mounted on either side were not providing sufficient buoyancy, and when one of them started to leak air, the vehicle quickly took on an alarming list to port! David Saunders was at the helm and he was the Special Vehicle Operations engineer who had been responsible for the conversion.

"He almost made it back to the beach, but with the starboard wheels spinning in the water and the port wheels on the bottom, the Discovery wasn't making headway. We had a Defender support vehicle with us which had a winch on the front, and that was used to pull the Discovery the final few yards onto the beach before anything too serious happened. That beach is still there today, on the western edge of the lake.

"The company had built an Amphibious Ninety and floated it very successfully at Cowes Week on the Isle of Wight in 1989. I was the driver for that event, or perhaps more appropriately the skipper, and the whole thing was



The amphibious Discovery's predecessor was this Ninety which sailed at Cowes Week 1989

great fun and proved hugely popular, although there was one particularly embarrassing moment.

"I'd driven the Ninety down the slipway into the Solent, and then sailed out to the famous Royal Yacht Squadron. On the way back I realised the tide had turned, and the Ninety could only do around five knots flat-out, which was barely enough to make headway against the tide. I ended up colliding with the mast outside the Royal Yacht Squadron building, right in front of Prince Philip who was watching from the balcony. It was not my finest hour..."

"Land Rover had entered into a five-year sponsorship deal with the event organisers, and with the launch of the new Discovery in October 1989, which was targeted

at the leisure, lifestyle and family markets, it made sense to convert a Discovery for the 1990 Cowes event. After all, the boating fraternity were seen as a core market for the new vehicle.

"The inspiration for the Ninety had come from the Air Portable General Purpose vehicle built by Land Rover in the early 1960s (see LRM Nov 2024) which had been trialled as an amphibious vehicle as part of its



development programme. One of these APGPs had survived at the Dunsfold Collection complete with its flotation bags and associated mountings, so Land Rover borrowed it, and SVO improved the design and fitted a revised set of mountings and airbags to the Ninety. It worked perfectly.

"When it came to preparing the Discovery for the 1990 event, SVO initially fitted two long airbags, one on each side. The Pendigo Lake test revealed very quickly that more were going to be required and three more were fabricated and installed, one at the front and two at the back, and the second flotation test was a success, piloted by David and I."

The Amphibious Discovery had started life with a 3.5-litre V8 and a Caracal Black paint job. Chassis number 383001 was registered G459 WAC on 1 October 1989 and was one of the fabled batch of vehicles assembled for the press launch held later that month in Plymouth. It is among the vehicles listed as participating in the launch event, although I have yet to find any photographs of it in its original guise.

One obvious question is why the company selected a petrol V8 Discovery as the donor vehicle, because from the outset it would have been clear that an amphibious Discovery would need to be diesel-powered and an engine transplant would therefore be needed, as well as a repaint. Roger suspects that the black V8 was the only vehicle not already designated for other use.

The conversion work was led by SVO engineer David Saunders and involved removing all but the edges of the roof and the goalpost over the rear door and replacing it with a bespoke black plastic pop-on cover, which was removed when the vehicle was on the water. The floors and doors were sealed and the engine bay waterproofed as far as possible, while a high-level air intake was installed on the left-hand A-pillar. The exhaust was extended halfway up the D-pillar, and marine navigation lights were mounted on the header rail above the centre of the windscreens.



The inspiration for the amphibious Ninety and Disco came from the 1960s APGP



The Disco debuted at Cowes Week 1990, taking Land Rover's guests to the Royal Squadron



After its appearance at Cowes the Discovery went to the Netherlands, where it was floated on the Amstel river in Amsterdam



Only the edge of the roof panel and the top of the rear goalpost were retained, and fitted with a pop-on soft top

A Sonic 70 Lightweight Hydraulic Sterndrive system was modified by manufacturer Sillette-Sonic Limited and mounted on a custom-made plate attached to the rear crossmember. The airbag flotation devices were fabricated by Checkmate Flexible Engineering Limited of Melksham in Wiltshire.

An additional ladder was installed on the left-hand side of the Discovery to allow people to climb from a platform on the airbag cover up and over the side of the vehicle, and a sturdy mounting was fitted to carry a single mast or flagpole amidships, with a light on top.

"At Cowes there was a launch ramp for boats near where the Land Rover Exhibition Unit was set up," Roger tells me. "The ramp gave us the opportunity to change from road wheels to using the hydraulically-powered propeller unit. We would simply drive down the ramp until we were floating and had sufficient clearance to lower the prop.

"Getting back onto dry land was just as straightforward, with the prop pushing the vehicle forward until the front wheels grounded on the ramp, at which point we would use the hydraulics to raise the prop unit, select drive and the Discovery would pull itself up the ramp. The hydraulics also powered the prop unit left and right to provide steering, via a lever attached to the valve block on the centre tunnel along with the other controls for the prop unit.

"The Discovery was in use daily throughout the event, taking invited guests and their families for trips out to the Royal Squadron. On one occasion I waved at Prince Philip, and he waved back. I don't think he recognised me from the previous year's incident."

After its successful appearance at Cowes Week, Roger lost contact with the vehicle when it was returned to SVO. Research shows that it was subsequently floated in the Netherlands, and there are photographs of it being lowered by crane into the river in Amsterdam and cruising past the famous Amstel Hotel. It is believed to have remained in the Netherlands on display for a few



Simply drive down the slipway until the vehicle is floating, lower the stern drive unit, and off you go...



...then sail onto the slipway until the front wheels ground, raise the stern drive unit, and drive up the ramp



years, but by 1996 it had moved to Germany.

In 2012 the company was planning a celebration of the One Millionth Discovery and, according to JLR's publicity material at the time, the Millionth would be the lead vehicle in a group of three Discovery 4s on the 'Journey of Discovery' from Solihull to the Auto China Show in Beijing, hoping to raise a million pounds for the International Red Cross and Red Crescent organisations.

Tagging along was a Series I which had been painted to represent both 'Oxford' and 'Cambridge', the two vehicles from the legendary First Overland Expedition of 1955, which had originally intended to drive from London to Beijing (then named Peking) but actually diverted en route to Singapore. On its way to Beijing, the 2012 expedition would call in at the Geneva Motor Show, where JLR had a significant presence.

As an aside, JLR's press release announcing the One Millionth's arrival in Beijing refers to four Discoveries, and this is because the expedition leader had second thoughts about the Series I going all the way to China, and its participation in the expedition was terminated in Italy, where a fourth Discovery 4 replaced it.

"Someone came up with the idea that the Amphibious

Flotation bags removed shows the access ladders, high level air intake and exhaust, and the stern drive unit

As found in Germany, left outside with no roof covering and in very poor condition

Discovery should form part of the Geneva show," Roger tells me. "I was given the task of getting it all sorted, but nobody knew where the vehicle actually was. After asking many people in the business if they had any idea where it had ended up, the conclusion seemed to be that it was last heard of in Germany. We asked Mayk Weinkötter, who was a member of the German National Sales Company's PR team, to find the vehicle and get it back to the UK.

"He quickly located the Discovery, and it turned out that it had been gifted by the head of the German NSC to a museum to pay for a service the museum had given to the NSC. The problem was that it wasn't actually his to give, and JLR records showed quite clearly that it still belonged to the company.

"After several conversations with the NSC and the museum, it was agreed that we could arrange collection and transportation of the vehicle back to the UK. We then found that it had been parked outside in a field and ignored for many years, because the museum didn't really want it. It was nothing short of a miracle that the Discovery had survived.

"My German colleagues who had seen it reported that it was in bad shape and would need some serious attention to make it driveable and, most importantly, seaworthy. I had it delivered in early February 2012 to the tool room at Solihull and asked Vehicle Operations to send a fitter over to check the vehicle out regarding drivability and give it a major service. The job was given to Steve Morrey who is one of the best bench fitters in the company. The problem was that the Geneva show was less than a month away.

"The Discovery was cleaned and stripped of all the ancillary equipment for the amphibious gear. Steve started to lay out all the parts for inspection, and we found that critical components that attached the flotation bags to the vehicle were missing. A call to Germany sent Mayk hurrying back to the museum, where he found the missing parts next to where the Discovery had spent its time abandoned. Apparently, when the vehicle was collected, deep snow had covered the parts, and they had been left behind."



Captain Crathome at the helm and ready to depart, Lake Geneva 2014



Sonic 70 Lightweight Hydraulic Stern Drive system was modified by manufacturers Sillette-Sonic Limited



Airbags were repaired by the original manufacturer and tested to 4psi...



... but it offered no guarantees regarding future leaks and took no responsibility for their safe function in use!





Geneva 2014 and bosun Bashall prepares to take command



G459 WAC will be on display at the Dunsfold Collection Spring Open Day on 26 April

The flotation bags were sent back to the original manufacturer for repairs and leak testing to 4psi. The invoice has survived and states 'the floats are old so although we have repaired them to the best of our ability, we can make no guarantees regarding future leaks or take any responsibility for their safe function in use'.

"Once all was complete and the Discovery checked over, it was shipped to Switzerland," Roger continues. "Once again it put on a great display and was very popular. The harbour master at our pier could not believe how well it handled and how easily it could dock to take on our passengers."

"The following year it was earmarked for the media-only 65th anniversary event at Packington Park, but during its trial swim before the guests arrived it blew its bellhousing. It turned out that someone had forgotten to put the wading plug in, and the bellhousing filled with water. The spinning flywheel created a turbine effect, and this cracked the casing, and because it could not be repaired in time the Discovery was sidelined. It was repaired by Vehicle Ops, but no one seemed particularly interested in taking it on, and it found its way to the Dunsfold Collection."

Dunsfold's Philip Bashall was asked to prepare it for a second visit to the Geneva Show in 2014, where it would be used to help celebrate the Discovery's 25th anniversary. "Once it was ready it was collected from Dunsfold and transported to Geneva," Philip says, "and because of my experience with the APGP and many other amphibious military vehicles, I was asked to join the JLR event team to look after the vehicle for the week. As well as having responsibility for maintenance, I ended up driving it on the lake all week and handling JLR's guests, while the off-road demonstration area elsewhere was managed by David Sneath's team. Once again, the Amphibious Discovery created a splash, but at the moment we have no plans to float it again."

