

UPWARDLY MOBILE...

This distinctive vehicle was developed privately and believed to be one of a kind, although 88in versions were used by BEA and BOAC and a 80in prototype is known to have survived →





Even with the elevator in the stowed position the 109 is very unstable; maximum speed 40mph



Publicity photo with British European Airways Vickers Viscount



88in Moy Conveyor Low Level in service with BOAC at Heathrow in 1966

THE vehicles you see on these pages emerged from the creative mind of the late Peter Charles Duffield Moy, although some of the engineering was carried out by the now defunct Precision Engineering Products (Suffolk) Ltd. The 109 has been one of the jewels of the Dunsfold Collection for many years, and the Series I 80-inch

is owned by Phil Smith.

My research on Dunsfold's Moy Conveyor for this article was almost complete when a visitor to the Dunsfold Open Day in April, Phil Smith, showed me an incredible photograph album depicting the 80 his grandfather bought from Peter Moy in 1986. Incredibly, a pile of period photographs that came with the 80 showed that it had once carried a similar conveyor to the Dunsfold 109. We'll bring you the full story of Phil's 80 in a future issue.

As always when investigating Land Rover conversions such as these, it's worth opening one of my all-time favourite Land Rover books, *Land Rover – The Unbeatable 4x4*, written by Ken and Julie Slavin and George Mackie. George created and ran the Land Rover Special Projects Department from its inception in 1957 until his retirement in 1981. Which means that back in the day he knew all there was to know about the multitude of weird, wonderful and occasionally wacky Land Rover-based vehicles that were proposed and developed by a raft of external companies and optimistic entrepreneurs.

Peter Moy was one such entrepreneur, and George described him in his book as, "an inventor with a likely idea whose family had been involved with the coal industry." Peter's idea was to create an adjustable, continuous conveyor belt system that could be mounted on a Land Rover, which would have the off-road capability to traverse



MOY
ALL-HYDRAULIC MOUNTED
CONVEYORS
LAND-ROVER CONVERSION LTD.
APPROVED BY THE ADVA COMPANY LTD.

LAND-ROVER

These Conveyors have been designed to meet the increasing demand for reliability in this and many other applications for the loading and unloading of bulk goods in various circumstances where the use of the equipment is of primary importance. They are available in various models, standard and low level.

THE STANDARD CONVEYOR, mounted on the 109 vehicle (LAND-ROVER Truck), can be raised and lowered with an action lock which the operator can only use when the vehicle is in gear and the engine is running. The equipment can be quickly dismantled from the LAND-ROVER, thus saving the vehicle for other duties.

THE LOW-LEVEL CONVEYOR, which has been designed especially as an AIRCRAFT LOADER, is mounted on the 80 vehicle (LAND-ROVER) with hydraulic jacks and other accessories, is a low level vehicle for loading and unloading of bulk goods. The low level height and the ability to move the conveyor to the side of the vehicle makes it particularly suitable for loading and unloading of aircraft. The equipment can be quickly dismantled from the LAND-ROVER, thus saving the vehicle for other duties.

PRECISION ENGINEERING PRODUCTS (SUFFOLK) LTD.,
BURY ST. EDMUNDS, ENGLAND. Tel. 2603

open-cast coal mining sites and assist with loading coal onto lorries or other such transportation systems.

George's observation that Peter's family was involved with the coal industry was a bit of an understatement, because Peter's great-grandfather, Thomas Moy, had created one of the country's largest industrial concerns, at the heart of which was coal from the mines of the Midlands and north-eastern England.

Thomas Moy Ltd was incorporated in 1891, although Thomas had become a coal, coke and

"MOY'S IDEA WAS TO CREATE A CONVEYOR MOUNTED TO A LAND ROVER"

lime merchant as early as the 1850s. With its headquarters in Colchester, the business grew rapidly and traded with collieries in Nottinghamshire, Derbyshire, Yorkshire and Tyneside, supplying and delivering coal throughout East Anglia and the East Midlands, as well as London.

At one point he owned a fleet of coastal steam ships that brought coal from the northern coalfields to ports between King's Lynn and London, but he could see that railways were the future and developed the Moy's Wagon



Detail of conveyor boom frame and belt, showing the transverse wooden battens



Front and rear conveyor booms and conveyor belt drive are located between the front seats, together with PTO drive



Vacuum gauge mounted below dashboard



The Series II is exceptionally original and an excellent reference for anyone looking for factory spec details

Company Ltd at Peterborough, to build and repair railway wagons, including his own.

Thomas also at various points owned a gas works, a brick and tile works, and a general builder's merchants operating from more than a dozen locations, and by the 1960s Thomas Moy Ltd was an agent for Shell-Mex and BP fuels. Thomas was one of the largest employers and industrialists in the Eastern Counties, and in Colchester he was a councillor, commissioner, and magistrate, and mayor for two consecutive terms in 1878 and 1879.

In 1929, Charles Moy, Thomas' son, retired as chairman of the company, having negotiated a deal that transferred a controlling interest in Thomas Moy Ltd to a large London-based coal company, although the Moy name and family involvement continued. In 1968, Thomas Moy Ltd was taken over by Charrington Fuels, which for a while traded as Charrington and Moy, until eventually the Moy name was dropped.

Thomas Moy's great-grandson, Peter Charles Duffield Moy, was born in 1927, two years before the company his grandfather had founded was, in effect, sold out of family control.

George Mackie offers nothing in his book regarding the date of his initial discussion with Peter Moy about his idea for a Land Rover-based coal conveyor, but it must have been in the late 1950s, not long after Land Rover's Special Projects Department was opened.

George wrote that Peter, 'had got so far with his invention, and came to see us about adapting the Land Rover power supply, hydraulics, axle-loads, brakes and all the usual things that inventors wanted to know about when they were trying to make a Land Rover do something that



109in Moy Conveyor is only the 20th Series II long-wheelbase built

wasn't in the minds of the original inventors'. 'During the course of our discussion,' George wrote, 'I mentioned that we had had approaches at various times for aircraft baggage loaders, and I thought that his device could be equally adapted for this purpose. In fact, Moy found this a more attractive proposition than his open-site coal loading and henceforth concentrated his energies on developing a baggage loader'.

On 23 March 1959, Peter Moy submitted his patent application to the UK authorities, in relation to, 'Improvements in, or relating to, mobile conveying and elevating apparatus'. It described how, 'the frame of an endless belt conveyor, which is mounted upon a power-driven wheeled vehicle, comprises two or more sections which are articulated together so that the angle of elevation of at least one section may be varied, the belt being driven by a reversible hydraulic motor'. The patent was confirmed on 18 October 1961. The United States followed with a patent on 28 August 1962, and a Canadian patent was awarded on 9 April 1963.

In due course, a four-page brochure with photographs and drawings was published in the standard format adopted by Land Rover Special Projects, and this featured two models: the Standard Conveyor, based on a Series II 109-inch Truck Cab, and the Low-Level Conveyor, based on a Series II 88-inch utility vehicle, which was described as being designed specifically as an aircraft loader.

Dunsford's YAC 498 is an example of the Standard Conveyor and carries a small maker's plate stamped with the serial number H/1, and we

"IT WAS FITTED WITH A SNOWPLOUGH AND SNAPPED CLEARING SLUSH ON ASHLEIGH RD, SOLIHULL"



Prior to conversion to the Conveyor, YAC 498 was on Rover's press fleet, seen here ploughing snow on Ashleigh Road in Solihull

assume the 'H' stands for 'High Level'. It is believed to be the prototype Standard Conveyor and probably the only example ever built. It is also believed to be the oldest Series II 109 in existence today.

Rover production records show that chassis number 1518 00020 was despatched out from the Solihull production line on 16 April 1958, painted grey and destined to join the Rover Company's Publicity Department as a demonstrator. DVLA records show that it was registered with the number YAC 498 on 15 April.

During its time with the Publicity Department, it was fitted with a snowplough and photographed clearing the slush on Ashleigh Road, Solihull. It's also a bit of a film star, appearing in Rover's 1958 Land Rover 10th anniversary film which announced the launch of the Series II, ferrying journalists around the place and accompanied by a good many other YAC-registered vehicles. The film is readily available online.

Rover records show that it was sold to PCD Moy in May 1960. The conveyor conversion was presumably finished before 18 October 1961, which was the date the UK authorities issued the patent, because the builder's plate on the vehicle states that the UK patent was still pending when the vehicle was completed.

In its new incarnation as a Moy Standard Conveyor, it was filmed participating in a Rover Alvis Demonstration Day, which was presumably held in late 1965 or early 1966, because Rover and Alvis were combined into a single organisation in June 1965. The film's

commentator stated that the Moy Conveyor was "already in service with British airlines, loading and unloading stores on Tridents and VC-10s."

In another clip, the 109 is shown with its bespoke trailer, which was designed to allow packages to be loaded from the trailer directly onto the conveyor, and unloaded from the conveyor straight into the back of the trailer. Interestingly, the trailer also survives and is in store with the Dunsfold Collection, complete with its maker's plate that describes it as a 'Pivoted Roller Floor Trailer' made by Peter Moy Ltd under a patent application dated 1965. The film also states that the Conveyor was, "undergoing trials as a light crane, with loads of up to 1500lb," using a hook mounted on the end of the conveyor arm.

The details of any trials the 109 participated in, whether with airlines or anyone else, are sadly unknown, but the vehicle was obviously demonstrated extensively, because a well-used single-page typed document survives at Dunsfold entitled 'Instructor's Note: Moy Conveyor Land Rover. To show to the public how a simple invention can permit the transport of goods from one level to another from a mobile conveyor'.

YAC 498 was placed on display at the Museum of Army Transport, which opened in 1983, in a former tannery at Flemingate in Beverley, in the East Riding of Yorkshire. Sadly, the Beverley museum closed in August 2003, but the Moy Conveyor eventually found itself in the care of the REME Museum at Bordon, and from there it joined the Dunsfold Collection in 2009 as part of a vehicle swap.

It has been on regular public display since the Dunsfold Collection museum opened its doors in 2023 and is a very popular exhibit. In 2015 it

"YAC 948 WAS PLACED ON DISPLAY AT THE MUSEUM OF ARMY TRANSPORT, WHICH OPENED IN 1983"



109 Moy Conveyor with the unique Moy Roller Floor trailer



Trailer dropside reveals tilting mechanism for roller floor



Original trailer plate shows maximum load was 5040lbs (2286kg)



Pole-mounted amber light is a later addition

rather incongruously lapped the circuit during the Goodwood Revival as one of 50 pre-1966 Land Rovers pulled together for the event by Roger Crathorne, which included 11 from Dunsfold.

Wally Dugan was curator at the Beverley museum and did a tremendous job saving many interesting army vehicles, military railway locomotives and, of course, the only surviving Blackburn Beverley RAF transport aircraft. The museum also housed a collection of military Land Rovers, and Wally remembers talking to Peter Moy about the conveyor.

"Peter visited the museum on several occasions, and I had the opportunity to discuss the development of the Moy Conveyor with him," Wally tells me. "YAC 498 was not trialled or used by the MOD, but was demonstrated to the civil airline companies, together with its Moy roller-bed trailer. A short-wheelbase version of the conveyor was assessed by the army, but this did not result in any orders."

The comment in the Rover Alvis Demonstration Day film about Moy Conveyors being in service with British airlines is reinforced by George Mackie, who wrote in his book: 'This was an interesting project, and Moy eventually sold several units to British Airways which were to be seen operating at Heathrow airport'.

A photograph in George's book of YAC 498 apparently loading a British European Airways Vickers Viscount is another interesting piece of historical evidence and was probably taken during the demonstrations that Wally refers to, between 30 August 1962 when the aircraft was withdrawn from service by BEA following its sale

to Brazilian airline VASP, and 25 July 1963 when it had been repainted and delivered by BEA to its new owners.

It seems that by 1963 Peter Moy had entered into a marketing and sales agreement with aircraft ground handling specialist, H W Edghill Equipment Ltd, of Hook in Hampshire. Edghill placed an advertisement in the 3 September 1964 issue of *Flight* magazine that included a photograph of a Series II 88-inch conveyor loading a BEA Trident airliner, with the vehicle now described as the 'Edghill-Moy Aircraft Loader Mk2'.

The advert stated that the vehicle was, 'now entering service with BEA and BOAC', and could be inspected on Edghill's stand at the 1964 Farnborough Airshow. Another Edghill advert in the 28 July 1966 issue of *Aeroplane* magazine shows an 88-inch Aircraft Loader Mk2, registered JMU 208B, loading baggage into another BEA Trident airliner.

Even more interesting is a photograph taken at Heathrow on 1 January 1968 showing a BOAC Vickers VC-10 being loaded by an 88-inch conveyor, painted in BOAC colours, with the registration number JMG 639B. As to their use by British Airways, as suggested by George Mackie, BEA and BOAC did not combine to form BA until 1974, and I think it is probably unlikely the Moy Conveyors were still in use by that date.

George Mackie summed up why he thought the conveyor was not a commercial success: 'I think it was a question of timing, because although certain aircraft were very suitable for Moy's loaders, the trend was towards containerisation,



Forward hydraulic ram is mounted on the front chassis dumb irons, together with support frame



88in at Goodwood Revival, 2015

and most new aircraft were being designed so that baggage could be loaded into a container, taken out to the aircraft, and elevated to the cargo door level, this giving the loader in the aircraft an opportunity to size up the whole load before deciding how to stow it. So, while this was a very interesting project, it had to give way eventually to changing demand'.

Which leaves us with two fascinating and historically important survivors from Peter Moy's Conveyor project, which is twice as many as I thought there were before my very welcome encounter with Phil Smith at the Dunsfold Spring Open Day. I wonder if any of the Heathrow 88s are also out there somewhere, waiting to be reunited with their Moy Conveyor history...